ICONES FILICUM:

AD EAS POTISSIMUM SPECIES ILLUSTRANDAS DESTINATÆ,

QUÆ HACTENUS,

VEL IN HERBARIIS DELITUERUNT

PRORSUS INCOGNITÆ,

VEL SALTEM

NONDUM PER ICONES BOTANICIS

INNOTUERUNT.

FIGURES AND DESCRIPTIONS OF FERNS,

PRINCIPALLY OF SUCH

AS HAVE BEEN ALTOGETHER UNNOTICED BY BOTANISTS,

OR

AS HAVE NOT YET BEEN CORRECTLY FIGURED.

BY

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IN TWO VOLUMES.

VOLUME II.

CONTAINING PLATES CXXI.—CCXL.

LONDINI:

PROSTANT VENALES APUD TREUTTEL ET WÜRTZ, TREUTTEL FIL. ET RICHTER, 30, SOHO-SQUARE:
PARISIIS; APUD TREUTTEL ET WÜRTZ, VIA DICTA DE BOURBON, No. 17.
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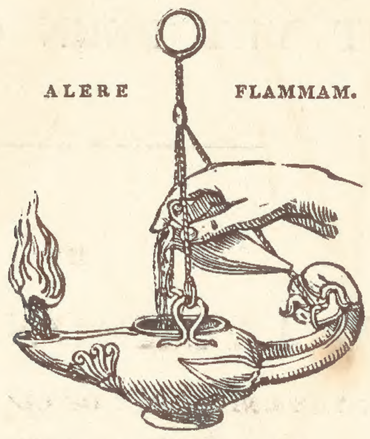


Aspidium confertum

TAB. CXXI.

ASPIDIUM CONFERTUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPIDIUM,* Br. *HYPOPELTIS,* Mich. *ASPIDII species,* Sw., Willd.

Sori rotundi, dorsales. *Involucrum* peltatum orbiculare, stipitatum, in medio sori insertum, undique liberum. *Br.*

Aspidium *confertum;* frondibus pinnatis, pinnis petiolatis alternis repandis, sterilibus oblongo-lanceolatis, fertilibus lineari-lanceolatis, rachi setoso-paleacea (paleis deciduis), soris seriatim confertis, indusiis peltatim revolventibus. *Kaulf.*

Aspidium confertum. *Kaulf. Enum. Fil. p.* 232. *Spreng. Syst. Veget. v.* 4. *p.* 96.

Hab. In Cayenna. *Richard.* In Demerara. *C. S. Parker.*

Stipes pedalis ad sesquipedalem, erectus, subteres, pallide fuscus, hinc canaliculatus: *frondis sterilis* crassitie pennæ anserinæ; *fertilis* pennæ corvinæ; basi præcipue paleaceo-hirsutus, paleis deciduis.

Frondes steriles a fertilibus diversæ, utræque pinnatæ.

Frons sterilis pedalis, circumscriptione ovata; *pinnæ* subnovem, alternæ, remotæ, palmares ad spithamæam, oblongo-lanceolatæ, acutæ, costatæ, parallelim venosæ, venis ramosis, duas uncias latæ, coriaceo-membranaceæ, margine incrassato subundulatæ, basi oblique cuneatæ, in petiolum brevem attenuatæ. *Rachis,* teste *Kaulfusio,* paleis sparsis setosis nigricantibus obsita: sed in nostris exemplaribus omnino glabra.

Frons fertilis: sterili multo minor, vix decem uncias longa, circumscriptione lanceolata: *pinnæ* remotæ, brevissime petiolatæ, lineari-lanceolatæ, costatæ, obscure parallelim et transversim venosæ, venis simplicibus.

Sori rotundati, numerosi, seriebus pluribus transversalibus longitudinalibusque arcte dispositi.

Involucrum orbiculare, stipitatum, peltatum, centro umbilicatum, demum marginibus reflexis, persistens.

Capsulæ pedicellatæ, annulatæ, annulo fere completo.

Semina oblonga, reticulata, pallide viridi-flavescentia.

Fig. 1. Frons sterilis, et f. 2. frons fertilis:—*mag. nat.* f. 3. Portio pinnæ fertilis cum soris. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

For our specimen of this noble species of *Aspidium,* which in general habit resembles the *Polybotrya cervina,* we are indebted to C. S. Parker, Esq., of Liverpool, who gathered it at Demerara, in British Guiana, in 1825. No other botanist appears to have seen this Fern in a growing state, except the late Professor Richard of Paris, from whose specimens Kaulfuss's character and description above quoted were taken, and who found it at Cayenne.

Trichomanes strictum

Dr Greville Delt

Swan Sc.

TAB. CXXII.

TRICHOMANES STRICTUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *strictum;* fronde lanceolata stricta pinnata, pinnis lanceolatis sub-bipinnatifidis, laciniis linearibus obtusis laxe reticulatis glabris integerrimis, involucris cyathiformibus ore aperto truncato integro, rachi marginata, stipite nudo.

Trichomanes strictum. *Menzies MSS.*

Hab. In sinu, Dusky Bay dicto, apud Novam Zeelandiam. *Menzies.*

Caudex, ut videtur, brevis, crassus, *radices* plures, ramosas, crassiusculas, nigro-fuscas emittens, setaceo-paleaceus.

Stipes digitalis, erectus, strictus, fuscus, teres, nudus.

Frons subpalmaris, circumscriptione, lanceolata, erecta, stricta, pinnata; pinnis alternis, lanceolatis, sub-bipinnatifidis, laciniis plerumque secundis, linearibus, glabris, integerrimis, costatis, laxe reticulatis, subpellucidis, apicibus rotundatis, obtusis.

Rachis marginata.

Sori rari, in singula pinna 1 vel 2, versus basin exteriorem segmentorum inferiorum inserti, laciniam brevem terminantes.

Involucrum cyathiforme, vix marginatum, ore dilatato, truncato, integro.

Columella filiformis, longe exserta, basi capsulifera.

Capsulæ ut in reliquis hujusce generis.

Semina subrotunda, paululum angulata, fusca.

Fig. 1. Portio pinnæ cum soro. f. 2. Columellæ pars inferior, cum capsulis. f. 3. Semina:—*magn. auct.*

This is one of the many interesting discoveries made by Mr. Menzies during the voyage of Captain Vancouver, which has ever since remained undescribed, or only noticed in the MSS. of our friend just mentioned. It is very distinct from any species we are acquainted with.

Hymenophyllum Plumieri.

Dr Greville Delt

Swan Sc.

TAB. CXXIII.

HYMENOPHYLLUM PLUMIERI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *Plumieri*; fronde lato-lanceolata bipinnatifida stellatim ferrugineo-hirsuta, laciniis lineari-oblongis integerrimis simplicibus bifidisve, involucris suborbicularibus semi-immersis infra medium bifidis ciliatis.

Filicula digitata. *Plum. Fil. p.* 73. *t.* 50. *B.*

Hab. In Hispaniola. *Plumier.* In rupibus et ad arborum truncos sylvis densis humidis, declivitate occidentali montis Pichincha, Andium Peruvianorum, non longe ab urbe Esmeraldas. *D. Prof. Gul. Jameson.*

Caudex nostris speciminibus abest.

Stipes bi-tripollicaris, inferne nudus, teres, ater, nitidus; superne lato-alatus, hirsutus.

Frons palmaris, circumscriptione, late lanceolata, bipinnatifida, nitida, facie superna margineque ubique pilis sparsis ferrugineis stellatis vestitis: segmentis primariis lato-lanceolatis, secundariis, vel laciniis, vix profundis, linearioblongis, integerrimis, minute reticulatis, nigro-costatis, integris vel bifidis, obtusis.

Sori numerosi, in laciniis terminales.

Involucrum suborbiculatum, basi immersum, profunde bilabiatum, labiis integerrimis ciliatis, ciliis ramosis.

Receptaculum breve, inclusum.

Capsulæ ut in congeneribus.

Semina globosa, pellucida, medio flava.

Fig. 1. Portio frondis cum soris. f. 2. Pilus dichotomus. f. 3. Involucrum. f. 4. Receptaculum cum capsulis. f. 5. Semina.

Under our description of *Hymenophyllum hirsutum* we have stated it as our opinion, that authors were scarcely justified in referring Plumier's *Filix digitata*, (*Fil. t.* 50. *B.*) to that species, which has simply pinnate or rather pinnatifid fronds; and that it is altogether a much smaller species: nor were we then acquainted with any *Hymenophyllum* with which it could with propriety be considered identical. Since that period, however, among a valuable collection of Ferns received from Professor William Jameson of Quito, we find a species so well according with the figure of Plumier, that we have scarcely a doubt as to the propriety of quoting it as a synonym. It is a robust and handsome plant, with, comparatively, broad primary segments of the frond, which are less deeply divided than most of our bipinnatifid species. The fructifications are numerous, and terminate many of the laciniæ, so as to form a sort of interrupted line or margin round the principal segments.

Hymenophyllum axillare.

Dr Greville del.t

Swan Sc.

TAB. CXXIV.

HYMENOPHYLLUM AXILLARE.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *axillare;* fronde oblongo-lanceolata pinnata, pinnis pinnatifidis segmentis simplicibus furcatis vel iterum pinnatifidis, laciniis linearibus emarginatis integerrimis glabris, involucris orbicularibus, profunde bilabiatis.

Hymenophyllum axillare. *Swartz. Ind. Occ. p.* 1750. *Syn. Fil. p.* 148. *Willd. Sp. Pl. v.* 5. *p.* 532. *Spreng. Syst. Veget. v.* 4. *p.* 132.

Hab. In montibus altissimis Jamaicæ, ad truncos arborum muscosos locis umbrosis. *Swartz.* Ex eadem insula communicaverunt *DD. Lunan, Higson,* et *Wiles.*

Caudex filiformis, repens, ramosus, hic illic fibras paucas emittens.

Stipes brevis, gracilis, teres, nudus, vix semiunciam longus.

Frons digitalis et ultra, circumscriptione, oblongo-lanceolata, obtusiuscula, flaccida, pinnata, pinnis subpollicaribus lanceolatis, pinnatifidis, segmentis superioribus simplicibus, intermediis plerumque furcatis, inferioribus non raro iterum pinnatifidis, laciniis linearibus, integerrimis, glabris, costatis, reticulatis, apice emarginatis. *Rachis* nuda, vel hic illic, ob pinnas decurrentes, marginata.

Sori solitarii in laciniis brevibus pinnarum supremarum terminales.

Involucra orbicularia, basi solummodo subcuneata, immersa, laxe reticulata, textura frondis, infra medium bilabiata, labiis integris.

Receptaculum inclusum.

Capsulæ paucæ, in singulo involucro, plerumque 4—5, majusculæ, peltatæ.

Semina angulata, subpellucida, pallide flava.

Fig. 1. Pinna superior cum soris. f. 2. Involucrum. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

This species, contrary to the habit of the greater number of the genus, has the rachis naked, or only slightly margined here and there by the decurrent bases of the pinnæ: hence the primary divisions are truly pinnated, the rest pinnatifid.

Polypodium irioides

TAB. CXXV.

POLYPODIUM IRIOIDES.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *PTERIS*, Linn. *Sori* subrotundi (seriati, sparsi v. conferti). *Involucrum* nullum. *Br.*

Polypodium *irioides;* fronde simplici sessili ensiformi glaberrima nitida reticulato-venosa, soris minutis numerosis sparsis.

Polypodium irioides. *Poir. in Encycl. Bot. v.* 5. *p.* 513. *Spreng. Syst. Veget. v.* 4. *p.* 48. *Sieber Fl. Maurit. n.* 287; et *Syn. Fil. n.* 38.

Polypodium sessile. *Kaulf. in Sieb. Syn. Fil. n.* 31.

Hab. Insula Mauritii (*Poiret; Sieber.*) ubi legit et communicavit *Cl. Bojer.* Provenit in sylvis montium ad arborum truncos, per totam peninsulam Indiæ Orientalis. *Wallich.* Prope Calcuttam. *Scouler.* Cult. in Hort. Bot. Liverpool, e China receptum. *Shepherd.*

Caudex?

Stipes brevis, fere nullus.

Frons pedalis ad bipedalem, membranacea, simplex, ensiformis, tenuiter marginata, inferne magis minusve attenuata, non raro subcordata, superne obtusiuscula vel etiam accuminata, glabra, nitida. *Costa* subvalida, glabra, superne sensim angustior. *Nervi* remoti obliqui, venis reticulatis connexi; *venulæ* glandulis oblongis terminatæ.

Sori rotundati, convexi, flavo-fusci, numerosi, parvi, sparsi, semper venis reticulatis inserti.

Capsulæ sublonge pedicellatæ, globosæ, pallide fusco-flavescentes, annulo fere completo cinctæ.

Semina oblonga, subhyalina, flavescentia.

Fig. 1. Portio frondis sterilis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

A beautiful Fern, and, as it appears, by no means uncommon in the East Indies; yet, strange to say, no one appears to have described it from his own observation, except Poiret in the *Encyclopédie Botanique*. Dr. Wallich tells us that it is common on the trunk of almost every Palm throughout India, and it was in such a situation that our specimens from near Calcutta were gathered by Dr. Scouler. To the Liverpool Botanic Garden it has been sent from China, and it is there cultivated successfully in the stove.

TAB CXXVI

Pteris ternifolia.

TAB. CXXVI.

PTERIS TERNIFOLIA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *PTERIS*, Linn. *Sori* lineares, marginales, continui; capsulis sinu involucri insertis. *Involucrum* marginale, continuum, scariosum, intus liberum. *Br.*

Pteris *ternifolia;* fronde bipinnata subcoriacea glabra, foliis ternatis linearibus margine revolutis summis binatis simplicibusque.

Pteris ternifolia. *Cavan. Præl.* 1801. *n.* 657.

Pteris peruviana. *Poir. in Encycl. Bot. v.* 5. *p.* 718. (1805.) *Spreng. Syst. Veget. v.* 4. *p.* 78.

Pteris subverticillata. *Swartz. Syn. Fil. p.* 103. *Willd. Sp. Pl. v.* 5. *p.* 375.

Pteris ternata. *Menzies MSS.*

Hab. In insulis Sandvicensibus. *Menzies.* Peru. *Jos. Jussieu; Cavanilles.* In muris antiquis et ædificiis prope urbem Quito. *D. Prof. Gul. Jameson.* In fissuris rupium, apud Sierra de Achiras et El Moro, Andium Meridionalium. *J. Gillies, M.D.*

Radix e fibris paucis, villosis.

Plantæ cæspitosæ crescunt.

Stipes digitalis, erectus, teres, atro-fuscus, nitidissimus, inferne solummodo paleaceo-squamosus, squamis lanceolatis, atris, fusco-marginatis, laciniatis, pilis immixtis.

Frons lineari-lanceolata, bipinnata, pinnis oppositis, ternis, sessilibus, supremis binis vel simplicibus, singula vix pollicem longa, lineari, acuta, margine revoluta, omnino glabra, superne medio canaliculata. *Rachis* teres, atro-fusca, nitidissima.

Sori marginales, continui.

Involucrum latiusculum, inflexum, e margine frondis formatum.

Capsulæ pedicellatæ.

Semina exacte sphærica, fusca.

Fig. 1. Portio pinnæ, cum sori. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

I do not know why the specific name of Swartz for this plant, *Pt. verticillata;* or that of Poiret, *Pt. peruviana,* should be preferred to that of Cavanilles, which is anterior in point of date, and admirably expressive of the curious structure of the pinnæ of this plant.

The species seems to be confined to the western side of the great continent of South America, extending, however, from Quito to the parallel of Mendoza, and to the opposite islands of the Sandwich group.

TAB CXXVII

Hymenophyllum abietinum

Dr. Greville Delt.

Swan Sc.

TAB. CXXVII.

HYMENOPHYLLUM ABIETINUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *abietinum;* fronde oblongo-lanceolata pinnata, pinnis bipinnatifidis, laciniis linearibus glabris integerrimis, apicibus retusis, involucris orbiculari-cordatis bipartitis integris, disco convexo, margine lato plano.

Hab. In declivitate occidentali montis Pichincha, Andium Peruvianorum, ad truncos arborum locis umbrosis. *D. Prof. Gul. Jameson.*

Caudex non visus.

Stipes duas vel tres uncias longus, gracilis, teres, nudus.

Frons spithamæa, et ultra, rigidiuscula, circumscriptione, oblongo-lanceolata, pinnata, pinnis numerosis lanceolatis, bipinnatifidis, laciniis linearibus, glabris, minute reticulatis, integerrimis, apicibus plerumque retusis, fertilibus sub soros contractis.

Sori terminales in laciniis brevibus segmentorum inferiorum pinnarum.

Involucrum orbiculari-cordatum, textura frondis, ad basin fere in dua labia integra fissum, disco convexo, margine lato plano.

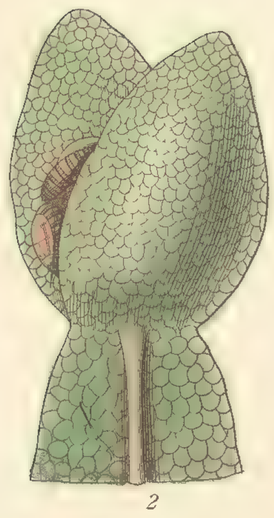
Receptaculum parvum, omnino inclusum.

Capsulæ peltatæ, annulo integro cinctæ.

Semina globosa, subangulata, fusca.

Fig. 1. Portio pinnæ cum soro. f. 2. Involucrum. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

Allied as this species is to several of the genus, we cannot but consider it abundantly distinct from all. It is of rather a rigid texture, the pinnæ are numerous, and twice or thrice divided in a pinnatifid manner. The most striking character is, however, in the shape of the involucrum, which is convex only in the centre, where it forms a kind of cell for the capsules, while the circumference is a broad and flat margin.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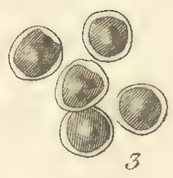
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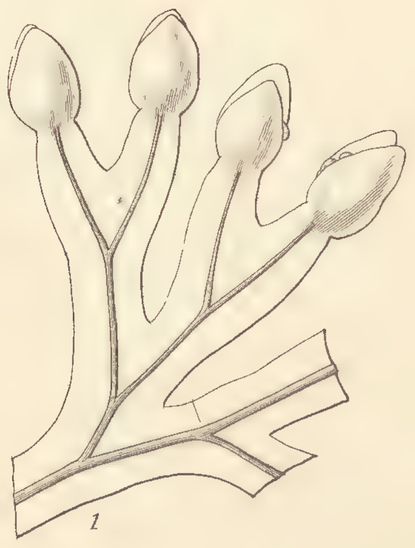
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Hymenophyllum polyanthos.

Dr. Greville Delt. *Swan Sc.*

TAB. CXXVIII.

HYMENOPHYLLUM POLYANTHOS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. ***HYMENOPHYLLUM,*** Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *polyanthos;* fronde ovato-deltoidea tripinnatifida, laciniis linearibus integerrimis obtusis glabris, infra soros contractis, involucris terminalibus exacte ovatis bipartitis, rachi superne marginata.

Hymenophyllum polyanthos. *Swartz. Fl. Ind. Occ. p.* 1757. *Syn. Fil. p.* 149. *Willd. Sp. Pl. v.* 5. *p.* 531. "*Hedw. Fil. Ic.*" *Spreng. Syst. Veget. v.* 4. *p.* 132.

Hab. In Jamaica. *Swartz.* Insula Sancti Vincentii. *Rev. L. Guilding.*

Caudex longe repens, capillaris, hic illic radiculosus.

Stipes biuncialis, erectus, teres, fusco-ater, superne subobscure marginatus.

Frons, circumscriptione, ovato-acuminata, subdeltoidea, tripinnatifida, segmentis primariis lanceolatis, secundariis subdigitatis, dichotomis, laciniis linearibus, obtusis, integris vel bifidis, omnino glabris, costatis, integerrimis, minute reticulatis, sub involucros contractis.

Sori terminales, in laciniis præcipue segmentorum superiorum.

Involucra exacte ovata, textura frondis, usque ad basin in segmentis vel labiis duobus paululum convexis integerrimis glabris fissa.

Receptaculum inclusum, involucro multo brevius.

Capsulæ orbiculatæ, peltatæ, annulo integro cinctæ.

Semina magna, intense fusca, limbo pellucido.

Fig. 1. Portio frondis cum soris. f. 2. Involucrum cum capsulis. f. 3. Semina:—*magn. auct.*

According to Swartz, *H. polyanthos* is very nearly allied to *H. clavatum;* differing in the more numerous fructifications and the somewhat winged stipes. The former character we can conceive to be liable to great variation according to age and other circumstances: and with regard to the latter particular, in our own specimens we find the stipes of some to be almost entirely naked, and others distinctly margined or winged in the upper part.

Authors, and even ourselves in some of our descriptions, have described the compound fronds of this and other *Hymenophylla* (and the same observation holds good with the genus *Trichomanes*) as *pinnate*, whereas they are truly *pinnatifid.* It is rare that the rachis, or main branch of the frond, is destitute of the foliaceous margins:—generally its structure is the same as that of the ultimate divisions.

Hymenophyllum tortuosum.

Dr Greville Del.

Swan Sc.

TAB. CXXIX.

HYMENOPHYLLUM TORTUOSUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *tortuosum;* fronde ovata tripinnatifida, laciniis linearibus obtusis glabris denticulatis marginibus plicatis tortuosis, involucris ovalibus inflatis, ore parvo bilabiato ciliato.

Trichomanes tortuosum. *Banks. Herb.* (*fide Menz.*)

Hab. In Nova Zeelandia. *A. Menzies.*

Caudex repens, gracilis, filiformis, hic illic subtomentosus atque radiculosus.

Frons, circumscriptione, ovata, subacuminata, tripinnatifida: segmentis primariis secundariisque subovatis, laciniis linearibus obtusis, nunc bifidis costatis, minute reticulatis, marginibus plicatis tortuosis denticulatis, ubique glabris.

Sori terminales, præcipue in laciniis inferioribus segmentorum secundariorum, majusculi, ovales, inflati, utrinque portione frondis, subemarginati, sublaxe reticulati, ore contracto, compresso, bilabiato; labiis perbrevibus, pulcherrime ciliatis.

Receptaculum intra involucrum clausum.

Capsulæ peltatæ, annulo completo cinctæ.

Semina parva, subangulata, subpellucida.

Fig. 1. Portio frondis cum soro. f. 2. Involucrum. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

In the structure of the frond, especially in the denticulated and twisted or plicate margin, the present species approaches near to the *H. dichotomum* and *dentatum* of Cavanilles, and the *H. denticulatum* of Swartz: but in none of those does the involucrum appear to be, as in this species, furnished with a remarkably small mouth (so that it looks like that of many *Jungermanniæ*), and with very short, distinctly ciliated lips.

Pteris stenophylla.

TAB. CXXX.

PTERIS STENOPHYLLA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *PTERIS*, Sm. *Sori* lineares, marginales, continui; capsulis sinu involucri insertis. *Involucrum* marginale, continuum, scariosum, intus liberum. *Br.*

Pteris *stenophylla;* fronde ternata vel pinnata, pinnis sessilibus lineari-lanceolatis acuminatis marginatis subundulatis integerrimis stipiteque longo glaberrimis.

Pteris stenophylla. *Wallich MSS.* 1829.

Pteris angusta. *Wallich MSS.* 1825 (non *Bory*).

Hab. In Nepalia. *Wallich.* 1818.

Radix a nobis non visa.

Stipes spithamæus ad pedalem, erectus, flexuosus, flavo-fuscus, gracilis, teres, hinc sulcatus, nitidus, basi solummodo subsquamosus.

Frons plerumque ternata, nunc pinnata. Pinnæ 4, lineari-lanceolatæ, sessiles, palmares ad pedalem, omnino integerrimæ, marginatæ, subundulatæ, utrinque glabræ, nitidæ, fere horizontaliter parallelim venosæ, venis simplicibus vel furcatis, *steriles* longe acuminatæ, acutissimæ. *Costa* glabra, flavo-fusca, subtus prominens.

Sorus marginalis, continuus.

Involucrum e margine inflexo frondis formatum, submembranaceum, fuscum.

Capsulæ longe stipitatæ.

Semina subtriangularia, pellucida, lineis notata quasi e granulis tribus formata.

Fig. 1. Portio frondis cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Nearly allied to *Pt. læta* of Wallich's MSS. (from Nepal) and the European *Pt. cretica:* but it may be known from both by its quite simple pinnæ and the entire margins.

Lycopodium taxifolium

TAB. CXXXI.

LYCOPODIUM TAXIFOLIUM.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

Lycopodium *taxifolium;* caule dichotome ramoso, foliis subsexfariis patulis lineari-oblongis acutissimis integerrimis planis, capsulis in axillis foliorum consimilium terminalium.

Lycopodium taxifolium. *Swartz Fl. Ind. Occ. p.* 1573. *Syn. Fil. p.* 175. *Willd. Sp. Pl. v.* 5. *p.* 48. *Spreng. Syst. Veget. v.* 4. *p.* 21.

Hab. In truncos arborum muscis repletos in montibus summis Jamaicæ, *Swartz.;* unde etiam miserunt *Bancroft, M.D., Wiles,* et *Lunan, M.D.* In insula Sanctæ Helenæ. *Swartz.* Hispaniola. *Willd.*

Radix e fibris ramosis, fuscis, cæspitosis.

Caules pendentes, pedales et ultra, repetitim dichotomi, ubique foliosi.

Folia subsexfariam inserta, patula, sex ad octo lineas longa, sesquilineam ad duas lineas lata, lineari-oblonga, acutissima, ad basin angustiora, sessilia, rigido-membranacea, margine integerrima, plana, supra medio obscure canaliculata, subtus nervo angusto prominente notata: *suprema* his omnino similia æque patula, sed paulo minora.

Capsulæ majusculæ, exacte reniformes, bivalvæ, flavæ.

Semina numerosa, parva, triangularia.

Fig. 1. Folium caulinum. f. 2. Folium fructiferum. f. 3. Semina:—*magn. auct.*

The species most nearly allied to *L. taxifolium* is, doubtless, the *L. gnidioides* of the Cape and the Mauritius; which has, however, a much more rigid habit, with shorter and more obtuse, more erect and imbricating leaves, the upper capsuliferous ones having a tendency to form a spike.

Adiantum macrophyllum

Dr. Greville Del.t

Swan.r Sc.

TAB. CXXXII.

ADIANTUM MACROPHYLLUM

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ADIANTUM,* Linn. *Sori* marginales punctiformes v. lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo libero. *Br.*

Adiantum *macrophyllum;* fronde pinnata, pinnis suboppositis subfalcatis acuminatis inciso-serratis brevissime petiolatis, inferioribus cordato-subhastatis, superioribus trapezoideis, involucris linearibus subcontinuis.

Adiantum macrophyllum. *Swartz Fl. Ind. Occ. p.* 1707. *Syn. Fil. p.* 122. *Willd. Sp. Pl. v.* 5. *p.* 429. *Humb. Nov. Gen. et Sp. v.* 1. *p.* 16; *v.* 7. *t.* 666. *Spreng. Syst. Veget. v.* 4. *t.* 110.

Adiantum simplex aut vix divisum &c. *Brown Jam. t.* 38. *f.* 1.

Trichomanes majus nigrum &c. *Sloane Jam. v.* 1. *p.* 81.

Hab. Jamaica. *Brown, Sloane, Wiles.* Insula Sancti Vincentii. *Rev. L. Guilding.* Sancti Trinitatis. *Lockhart.* Ad aditum speluncæ de Guacharo, prope Caripe, alt. 500 hexap. *Humboldt.*

Radix cæspitosa, fibrosa, fibris numerosis, valde ramosis, subtomentosis.

Stipites plurimi ex eadem radice, palmares ad spithamæam, erecti, teretes, aterrimi, nitidissimi.

Frons spithamæa ad pedalem et ultra, simpliciter pinnata; pinnis brevissime petiolatis, digitalibus, *inferioribus* oppositis, cordato-subhastatis, *superioribus* trapezoideis, *terminali* non raro hinc unilobata, omnibus inæqualibus superne sublunatis, acuminatis, versus apicem præcipue inciso-serratis, indistincte radiato-venosis, supra viridibus, subnitidis, subtus sparsis subglaucis:—fronde sterili pinnis latioribus. *Rachis* teres, atra, nitidissima.

Sori marginales, subcontinui, medium versus pinnarum, latere superiore et inferiore inserti.

Involucrum lineare, membranaceum, fuscum.

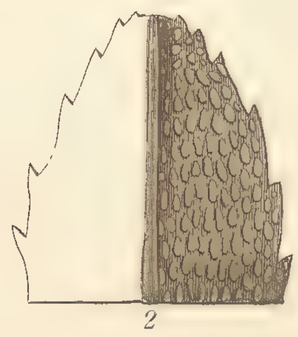
Capsulæ longe pedicellatæ.

Semina subtriangularia, semipellucida, fusca.

Fig. 1. Portio pinnæ cum soro. f. 2. Capsulæ. f. 3. Semina.

Having received some fine specimens of this noble Fern from Jamaica, as well as from St. Vincent and Trinidad, we could not resist the temptation of giving a figure of it, although a very good one, of a single fertile frond, exists in the rare and costly work of Humboldt and Kunth.

The species most nearly allied to this is the *Ad. obliquum* of Sprengel, or rather of Willdenow; only that the latter seems to have confounded the *Ad. lucidum* with it. It is, however, much smaller than *A. macrophyllum,* less angular towards the base, more glaucous beneath, with more numerous sori and a pubescent rachis.



Hymenophyllum secundum.

Dr. Greville Delt. *Swan Sc.*

TAB. CXXXIII.

HYMENOPHYLLUM SECUNDUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *secundum;* fronde bipinnatifida, pinnis subflabelliformibus, laciniis linearibus dichotomis serratis secundis, involucris ovalibus subcompressis integerrimis.

Hab. In Nova Zeelandia. *A. Menzies.*

Caudex gracilis, filiformis, repens, hic illic tomentosus, atque radiculosus, ramosus.

Stipes subuncialis, teres, nudus, fuscus.

Frons, circumscriptione, ovato-lanceolata, bipinnatifida, segmentis primariis, seu pinnis, semiovatis, curvatis, subflabelliformibus; laciniis omnibus secundis, furcatis, linearibus, serratis, obtusis, minute reticulatis. *Rachis* alata, margine integerrimo. *Color,* siccitate, intense fuscus.

Sori, in pinnis superioribus præcipue, ad extremitatem laciniarum brevium integerrimarum siti.

Involucrum ovale subcompressum, usque ad medium bilabiatum, labiis integerrimis.

Receptaculum inclusum.

Fig. 1. Pinna superior:—*magn. auct.* f. 2. Portio laciniæ:—*magis auct.*

A very beautiful species, and distinguished from all others with which we are acquainted, by the secondary segments or divisions of the fronds all pointing one way.

Cheilanthes farinosa

Dr Greville Delt

Swan Sc

CHEILANTHES FARINOSA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *CHEILANTHES*, Sm. *Sori* marginales, punctiformes; capsulis sinu involucri insertis. *Involucrum* marginale, interius liberum scariosum, v. e crenula ipsius marginis replicata formatum. *Br.*

Cheilanthes *farinosa*; fronde pinnata, pinnis subtus niveo-farinosis deltoideo-lanceolatis pinnatifidis, laciniis oblongis integerrimis infimis pinnarum inferiarum iterum pinnatifidis, indusiis subcontinuis, stipite squamoso.

Cheilanthes farinosa. *Kaulf. Enum. Fil. p.* 212. *Spreng. Syst. Veget. v.* 4. *p.* 115. *Wall. MSS.* (1823.)

Cheilanthes dealbata. *Don Prodr. Fl. Nepal. p.* 16?

Pteris farinosa. *Forsk. Fl. Æg. Arab. p.* 187. *Vahl. Symb. v.* 3. *t.* 75. *Swartz Syn. Fil. p.* 105. *Willd. Sp. Pl. v.* 5. *p.* 397.

Pteris decursiva. *Forsk. Æg. Arab. p.* 186. (fide Kaulf.) *Swartz Syn. Fil. p.* 101.

Pteris argyrophylla. *Swartz Syn. Fil. p.* 105. *Willd. Sp. Pl. p.* 361.

Pteris argentea. *Bory It. v.* 1. *p.* 327.

Cheilanthes pulveracea. *Reliq. Hænk. p.* 64. *Spreng. Syst. Veget. v.* 4. *p.* 115.

Hab. In Ægypto. *Forsk.* Insula Borboniæ. *Bory.* Mexico. *Hænke.* In Nepalia. *Hamilton. Wallich.* In agro Madraspatano. *Wright, Shuter.*

Radix e fibris numerosis, flexuosis, ramosis, fuscis.

Stipites plures, cæspitosi, digitales ad spithamæam, atro-purpurei, nitidissimi, paleaceo-squamosi; squamis sparsis membranaceis, fuscis, majusculis.

Frons forma et magnitudine mire variat; nunc ovato-deltoidea, nunc lanceolata, palmaris ad pedalem vel etiam sesquipedalem, pinnata; pinnis lanceolatis, subdeltoideis, nempe basi semper latiore, profunde pinnatifidis, supra viridibus, subtus albido- vel niveo-farinosis, laciniis oblongis vel oblongo-lanceolatis obtusis, integris, siccitate incurvis, infimis, pinnarum inferiarum, elongatis, pinnatifidis. *Rachis* teres, nuda, costaque aterrima.

Sori marginales, interrupti, parvi.

Involucra minuta, squamiformia, membranacea, marginalia, subcontinua, cito reflexa, evanescentia.

Capsulæ dense congestæ, sessiles, annulo lato, vix completo, cinctæ.

Semina globosa, subangulata.

Fig. 1. Apex laciniæ frondis cum soris (statu juniore). f. 2. Portio pinnæ cum soris adultis. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

The specimens from which our figure and description are taken of this plant were received from the East India Company, with Dr. Wallich's name of *Cheilanthes farinosa**, from Nepal. They are therefore in all probability the same as the *Ch. dealbata* of Don's *Prodr. Fl. Nepal.:* the description of which entirely agrees with our plant, except that the indusium is said to be fimbriated, which is not the case in our specimen. We quite agree with Dr. Wallich in considering it to be the same as the Ægyptian *Ch. farinosa;* the figure of which given by Wallich, although stated by Kaulfuss to be bad, is yet sufficiently characteristic of our plant. It is probably not an uncommon species in other parts of the world; and I see no reason to separate the *pulveracea* of Presl in *Reliq. Hænk.* from our species, with which the description sufficiently accords.

The involucra are very small, and soon disappear as the capsules advance to maturity.

* Since the above was written, we find this plant marked as No. 65. of Dr. Wallich's printed list of the Ferns of his princely collection, and as "*C. dealbata* Wall., *Ch. farinosa* Wallich (haud Kaulf.) Herb. 1823." And the following stations are given: "1. Nepalia, 1820; 2. Proma, Irawaddy, 1826; 3. Pundooal (De Silva); 4. var. *vestita,* ad Mareko, Nepaliæ, 1823."—We shall render our synonyms and stations, of East India Ferns especially, more complete in an Appendix to our work.

Hymenophyllum elasticum

Swan.

W. Grev. Illus. D.ᵗ

TAB. CXXXV.

HYMENOPHYLLUM ELASTICUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *elasticum;* fronde oblongo-ovata pinnata, pinnis bipinnatifidis, laciniis linearisubattenuatis integerrimis, costa rachi (superne alata) margineque pilosis, involucris parvis semiorbicularibus ciliatis.

Hymenophyllum elasticum. *Willd. Sp. Pl. v.* 5. *p.* 520. *Spreng. Syst. Veget. v.* 4. *p.* 134. *Sieber, Synopsis Fil. n.* 78.

Hab. In insulis Mauritii et Borboniæ. *Bory.* In sylvis vastis, locis humidis et umbrosis, ad arborum truncos insulæ Mauritii. *D. Prof. Bojer.*

Caudex repens, filiformis, radiculosus, paleaceo-hirsutus.

Stipes digitalis, teres, ater, glaber, superne subpilosus.

Frons, circumscriptione, oblongo-ovata, subacuminata, rigidiuscula, elastica, pinnata; pinnis ovato-lanceolatis, acuminatis, alternis, remotiusculis, bipinnatifidis, flavo-viridibus, nitidis, laciniis paululum attenuatis, obtusiusculis, linearibus, subnumerosis, confertis, minute reticulatis, integerrimis, costa nigra margineque pilosis, pilis appressis, stellatim ramosis. *Rachis* pilosa, superne solummodo marginata.

Sori numerosi, in laciniis brevibus segmentorum, terminales.

Involucrum minutum, semiorbiculare, profunde bivalve, vix semi-immersum, valvis integris ciliatis.

Receptaculum inclusum.

Capsulæ majusculæ, numerosæ, peltatæ.

Semina minutissima, ovalia, subangulata, pellucida.

Fig. 1. Portio pinnæ cum soris. f. 2. Involucrum capsulis repletum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

The present is assuredly amongst the most elegant of this beautiful family, and remarkable, as its name implies, for its elastic property. The whole frond is of a glossy yellow-green colour, with the midrib black, and clothed, as is the margin, with appressed branching hairs. We have received numerous specimens from our friends C. Telfair, Esq. and Professor Bojer, from the Mauritius.

Asplenium integerrimum

TAB. CXXXVI.

ASPLENIUM INTEGERRIMUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM,* Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *integerrimum;* fronde pinnata glabra, pinnis oblique lanceolatis acuminatis coriaceis integerrimis margine superiore subunilobato, basi cuneata, soris parallelis, rachi alata.

Asplenium integerrimum. *Wallich MSS. Spreng. in Nov. Act. Acad. Imp.* 1821. *p.* 231? *Syst. Veget. v.* 4. *p.* 81?

Hab. In Nepalia. *Wallich.* Portorico? *Bertero.* (*Sprengel.*)

Caudex horizontalis, crassus, inferne radiculosus, superne paleaceo-hirsutus.

Stipes digitalis ad spithamæam, semiteres, superne alatus, basi subpaleaceus.

Frons glaber, spithamæus et ultra, circumscriptione lanceolata, pinnata; pinnis paucis, subquinque, remotis, plerumque alternis, digitalibus ad palmarem, terminali æquali, reliquis oblique lanceolatis, sensim et longe acuminatis, margine superno dilatatis et nonnunquam in lobo acuminato productis, tenui-marginatis, integerrimis, coriaceis, vix costatis; nervis plurimis, parallelis, dichotomis instructis.

Rachis compressa, alata.

Sori lineares, elongati, nervis parallelis inserti.

Involucrum angustum, membranaceum, fuscum.

Capsulæ sublonge pedicellatæ.

Semina subovalia, rugosa, marginata, margine vel limbo, sub summo lente, quasi transversim striato.

Fig. 1. Portio pinnæ cum soris. f. 2. Capsulæ. f. 3. Semina;—*magn. auct.*

This Fern we received from Dr. Wallich in the year 1815, with the MS. name of *A. integerrimum.* Long since that period a West Indian Fern has been published by Professor Sprengel, first in the *Nova Acta Acad. Imp. Cæs.*, and afterwards in the author's *Systema Vegetabilium,* under the same name; and, what is remarkable, agreeing in almost every particular with our plant. We dare not, however, so far assert that it is the same, as to quote the synonyms without some mark of doubt; nor, on the other hand, are we willing to run the risk of creating confusion by giving a new name to a species that may have been already described.

Asplenium alatum

D.r Greville Del.t

Swan Sc

TAB. CXXXVII.

ASPLENIUM ALATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *alatum;* fronde lanceolata pinnata apice radicante, pinnis oblongo-lanceolatis duplicato-serratis obtusis breviter petiolatis, rachi lineari alata.

Asplenium alatum. (*Humb. et Bonpl.*) *Willd. Sp. Pl. v.* 5. *p.* 319. *Humb. et Kunth, Nov. Gen. v.* 1. *p.* 12. *Spreng. Syst. Veget. v.* 4. *p.* 84.

Hab. In Nova Andalusia, regione temperata, prope Caripe et in declivitate montis Cocollar usque ad altitudinem 500 hexap. *Humb.* In Jamaica, *D. Lunan, Higson, & Wiles.*

Stipites 4—6 pollicares, superne compressi, alati, inferne teretes, fusci, nudi, cæspitosi atque radicantes. *Radices* fibrosæ, subramosæ.

Frondes pedales et ultra, circumscriptione, lanceolatæ, pinnatæ, ubique glabræ, atro-virides, membranaceæ. *Pinnæ* unciam ad duas uncias longæ, alternæ, remotiusculæ, horizontaliter patentes, oblongo-lanceolatæ, obtusæ, margine duplicato-serratæ, serraturis obtusis, basi latiores, truncatæ, sursum subauriculatæ, brevissime petiolatæ.

Rachis compressa, margine membranaceo, viridi alato, versus apicem pinnarum denudata, ad summum apicem radicans.

Sori numerosi, obliqui, in singula vena laterali, duas lineas longi.

Involucrum membranaceum, lineare.

Capsulæ rufo-fuscæ.

Semina numerosa, fusca, ovalia vel subreniformia, marginata, margine subechinata.

Fig. 1. Portio pinnæ cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

It is singular that this very striking species of Fern should so long have remained unnoticed in the much frequented island of Jamaica; and have been first brought to the knowledge of botanists by Humboldt in the province of New Andalusia, upon the continent of South America. Nor does it appear to be uncommon in Jamaica, if we may judge from our having received it from the three botanists above mentioned.

Davallia parvula

Dr Greville Delt

J. Swan Sc

DAVALLIA PARVULA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *DAVALLIA,* Sm. *Sori* subrotundi (vel in lineola verticali) margini plerumque approximati. *Involucrum* superficiarium, ex apice venæ unicæ ortum, lateribus vel lata basi adnatum, exterius et verticaliter liberum. *Br.*

Davallia *parvula;* frondibus deltoideis tripinnatis glabris, pinnis linearibus apice furcatis acutis, soris in axillis segmentorum ultimorum, involucris subrotundis basi solummodo adnatis.

Davallia parvula. *Wallich MSS.*

Hab. Apud Singapure. *Wallich.*

Caudex longe repens, flexuosus, subfiliformis, hic illic radiculosus, ubique squamis subulatis, membranaceis, badiis, imbricatis tectus.

Stipites filiformes, unciales, erecti, glabri, læves, tereti-compressi.

Frondes subunciam longæ, circumscriptione deltoideæ, tripinnatæ, glabræ, subnitidæ. *Pinnæ* breviusculæ, angustæ, lineares, supra planæ vel (siccitate) canaliculatæ, subtus convexæ, apice furcatæ, acutæ; segmentis ultimis fructiferis incurvis: omnibus enerviis.

Sori in axillis pinnarum, ad basin segmentorum superiorum.

Involucrum subrotundum, basi contractum et adnatum, membranaceum, pallide fuscum, margine superne latiore, libero.

Capsulæ subrotundæ, annulo lato, articulato, vix completo cinctæ, longe pedicellatæ.

Semina ovalia, subangulata, paululum pellucida, pallide flava.

Fig. 1. Portio frondis soriferæ, subtus visa. f. 2. Segmentum ultimum cum soro. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This is unquestionably the smallest species of the genus with which we are acquainted, and it is one of the most beautiful.

For this plant we have again to express our acknowledgements to Dr. Wallich, Director of the Honourable East India Company's Botanic Garden at Calcutta, whose arrival in this country, after twenty years' devotion to the arduous duties of his profession in India, with a collection never before equalled for number and value, amounting to no less than twenty-five tons weight, is, indeed, in every point of view, a subject of congratulation to the admirers of botanical science. Upon the merits of this no less excellent man, than acute, profound, industrious, and princely-minded botanist, we have already had occasion to dilate. Not only has he explored,—and sometimes at the risk of his health and even life,—the extensive region of the Hindoo dominions; but the territory of Nepal, the Birman empire, hitherto untrodden by the foot of any botanist, the islands of Singapure and the Mauritius, have all been laid under contribution by the personal exertions of this indefatigable naturalist, everywhere accompanied as he was by collectors, and by the amplest facilities for preserving the immense treasures which were thus amassed. When Dr. Wallich's engagements did not allow him to extend his researches, the most intelligent collectors were sent. In Ferns, as may be supposed, many of these countries are particularly rich; and the number of species, especially of new and curious ones, is exceedingly great. Dr. Wallich disclaims any merit in all this; and begs that the honour due to the amassing of all this vast collection, and of thus rendering such effectual service to the cause of Botany, may be given to the Honourable the Directors of the East India Company; at whose expense, with a liberality that can never be too much extolled, has been projected and brought to its present state of usefulness the truly princely establishment of the Calcutta Botanic Garden.

Useful plants, especially forest-trees, shrubs, fruit-trees, and ornamental plants, have by it been gratuitously supplied to every climate suited to their growth, and to gardens in almost every part of the world. The *Flora Indica,* the *Tentamen Floræ Nepalensis Illustratæ,* and various *Memoirs* on the new and useful vegetable productions, a splendid work from the pen of Dr. Wallich, with numerous coloured figures, under the title of *Plantæ Asiaticæ Rariores,* now in the press, are some of the publications resulting from these collections: and to crown all, after a complete set of the plants themselves shall have been deposited in the Museum of the India House, the whole of the rest,—probably exceeding 9,000 species,—will be divided amongst the most eminent Botanists in this and other countries.

This is indeed a line of conduct worthy of so great a government, and a knowledge of which cannot be too widely circulated, with the hope that it may be a pattern to others to follow so honourable an example.

TAB CXXXIX

Dávallia pectinata.

Dr Greville Del^t

Swan Sc.

TAB. CXXXIX.

DAVALLIA PECTINATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd., Spreng.*

Gen. Char. *DAVALLIA*, Sm. *Sori* subrotundi (vel in lineola verticali) margini plerumque approximati. *Involucrum* superficiarium, ex apice venæ unicæ ortum, lateribus vel lata basi adnatum, exterius et verticaliter liberum. *Br.*

Davallia *pectinata;* fronde ovato-lanceolata coriacea profunde pinnatifida, segmentis lanceolatis crenatis obtusis, inferioribus semipinnatifidis, involucris reniformibus marginalibus.

Davallia pectinata. *Smith Act. Taur. v.* 5. *p.* 414. *Sm. Tracts, p.* 249. *Swartz Syn. Fil. p.* 130. *Spreng. Syst. Veget. v.* 4. *p.* 118.

Hab. In insula Otaheite. *Menzies.* In Malacca, et in insulis Nicobar dictis. *Smith.*

Caudex repens, flexuosus, crassitie pennæ corvinæ, ubique squamosus; squamis imbricatis, lanceolatis, membranaceis, fuscis; subtus hic illic radiculosus.

Stipes digitalis, erectus, glaber, basi solummodo squamosus, fuscus, teres, hinc canaliculatus.

Frons digitalis, ovato-lanceolata, coriacea, glabra, subnitida, profunde et subpectinato-pinnatifida; laciniis alternis, horizontalibus, lanceolatis, vel lineari-lanceolatis, obtusis, margine crenatis, vel sinuatis, inferioribus margine inferiore iterum pinnatifidis. *Costa* distincta, venis obliquis obscuris superne latioribus soriferis.

Sori marginales, numerosæ, venis terminantes.

Involucrum reniforme, fere ut in *Nephrodio*, basi subgibbosum in nervum decurrens, reliquo libero, integerrimo. *Substantia* membranacea, rigidiuscula, fusca.

Capsulæ sublonge pedicellatæ, sphæricæ, annulatæ.

Semina ovalia, vix angulata, sub summo lente reticulata, pallide fusca.

Fig. 1. Portio frondis cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

For this species of *Davallia,* a native alike of the Indian islands and of those of the Pacific, we are indebted to Archibald Menzies, Esq. In habit it resembles the *Davallia pedata;* and in the form of its involucre there is a great similarity with that of *Nephrodium:* or it may be looked upon as the involucre of a true *Davallia* with winged margins.

TAB CXL

Aspidium glandulosum!

Dr Greville Delt

Swan. Sc

TAB. CXL.

ASPIDIUM GLANDULOSUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPIDIUM*, Br. *HYPOPELTIS*, Mich. *Sori* rotundi, dorsales. *Involucrum* orbiculare, peltatum, stipitatum, in medio sori insertum, undique liberum. *Br.*

Aspidium *glandulosum;* frondibus lanceolatis pinnatis, pinnis oblongo-lanceolatis sinuato-crenatis obtusis decurrentibus pubescenti-glandulosis, soris solitariis, stipite brevi paleaceo.

Hab. Jamaica. *D. Lunan, Higson, & Wiles.*

Radix e fibris paucis, simplicibus, flexuosis, pilosis.

Planta cæspitosa.

Stipites breves, vix pollicares, dense paleaceo-squamosi: squamis ovatis, acuminatis, nonnunquam sublaceratis, nitidis, fuscis.

Frondes, circumscriptione, lanceolatæ, palmares, pinnatæ. *Pinnæ* vix unciam longæ, obtusæ, oblongo-lanceolatæ, sinuatæ atque dentato-crenatæ, utrinque pilis brevibus, sub lente, non raro articulatis, capitatis glandulosæ, basi inferne decurrentes, ita ut frons fere pinnatifida.

Rachis, basibus decurrentibus pinnarum quasi alata, utrinque minute glanduloso-pubescens.

Sori solitarii, majusculi, in omnibus pinnis frondis inserti, in singula pinna 4 ad 7 vel 8, linea longitudinali intra costam et marginem dispositi.

Involucrum orbiculare, subconvexum, margine nunc sublaceratum, centro umbilicatum.

Capsulæ numerosæ, longe stipitatæ.

Semina ovalia vel subreniformia, fusca, plerumque, sub lente, marginata, margine echinato.

Fig. 1. Portio frondis cum pube glandulosa. f. 2. Sorus cum involucro. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Much as has been done by the excellent Swartz and other botanists among the Ferns of Jamaica, there still appear to be many undescribed species in that fertile island. Amongst a considerable collection that we have received from our friends and correspondents, now resident in that island, particularly Drs. Bancroft and Macfadyen, Messrs. Wiles, Lunan, and Higson, the present individual strikes us as an interesting species, of which we can find no description.

The fronds might with almost equal propriety be called *pinnatifid* as *pinnated*, so constantly decurrent are the bases of all the pinnæ. The stipes is particularly short, and the whole frond, above and beneath, is covered by minute glandular hairs, which give a dotted appearance to the entire surface.

2

1

3

1

Davallia contigua?

Dr. Greville, Del.

Swan Sc.

TAB. CXLI.

DAVALLIA CONTIGUA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *DAVALLIA*, Sm. *Sori* subrotundi (vel in lineola verticali) margini plerumque approximati. *Involucrum* superficiarium, ex apice venæ unicæ ortum, lateribus vel lata basi adnatum, exterius et verticaliter liberum. *Br.*

Davallia *contigua*; fronde stipitata simplici glabra pectinato-pinnatifida, laciniis linearibus integris vel subcrenatis, infimis brevissimis, soris solitariis vel paucis in apicem laciniarum.

Davallia contigua. *Swartz. Syn. Fil. p.* 130. *Willd. Sp. Pl. v.* 5. *p.* 465. *Spreng. Syst. Veget. v.* 4. *p.* 118. *Blume Enum. Pl. Jav. v.* 1. *p.* 230.

Trichomanes contiguum. "*Forst. Prodr. n.* 463."

Hab. In Insulis Oceani Pacifici. *Forster.* In arboribus montium Javæ. *Blume.* In Zeylonia. — *Emerson, M.D.*

Caudex, ut videtur, brevis, fusco-squamosus, fibras nigras, ramosas emittens.

Stipes vix unciam longus, superne laciniis brevissimis, decurrentibus subalatus.

Frondes spithamææ et ultra, rigidæ, subcoriaceæ, circumscriptione lanceolatæ, basi apiceque attenuatæ, simplices, profunde pinnatifidæ, laciniis patentibus linearibus vel lineari-oblongis, obtusis, apice nunc, raro, subcrenatis soriferis, infimis atque supremis brevissimis. *Stipes Rachis*que glabræ (fide Blumii, hirtellæ).

Sori parvi ad apicem laciniarum, plerumque, nostris exemplaribus, solitarii.

Involucra ovalia, vel ovali-oblonga, nervum terminantia, coriacea, cucullata, apice dehiscentia.

Capsulæ longe stipitatæ, sphæricæ.

Semina subrotunda, fusca.

Fig. 1. Lacinia cum soro. f. 2. Involucri sectio. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

Allied to *D. Emersoni*, figured at Tab. 105 of this work, but having much deeper and narrower laciniæ to the frond, not entire at the base and the extremity, and furnished with a distinct stipes.

For a long time it was supposed to be peculiar to the islands of the Pacific; but, recently, Dr. Blume has found it in Java, and Dr. Emerson, to whom we are indebted for the specimen here figured and described, in the Island of Ceylon.

Pteris biaurita?

Dr Greville Del.

Swan Sc.

TAB. CXLII.

PTERIS BIAURITA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *PTERIS*, Linn. *Sori* lineares, marginales, continui; capsulis sinu involucri insertis. *Involucrum* marginale, continuum, scariosum, intus liberum. *Br.*

Pteris *biaurita;* glaberrima, fronde pinnata, pinnis lanceolatis attenuatis pinnatifidis, infimis bipartitis, laciniis oblongo-lanceolatis subfalcatis obtusis serratis, stipite rachique glabris.

Pteris biaurita. *Linn. Sp. Pl. p.* 1534. *Swartz. Syn. Fil. p.* 98. ("excl. patria et syn. Retzii," *Willd.*) *Willd. Sp. Pl. v.* 5. *p.* 384. *Spreng. Syst. Veget. v.* 4. *p.* 74.

Filix pinnulis lonchitidis &c. *Plum. Am. p.* 10. *t.* 14. *Fil. p.* 13. *t.* 5.

Hab. In India Occidentali. Insula Sancti Vincentii. *Rev. L. Guilding.* E Jamaica, ubi vulgaris, miserunt *Dom. Bancroft & Higson.* In Insula Sanctæ Trinitatis. *De Schach.*

Caudex repens, squamosus, squamis densis, fuscis, nitidis, hic illic radices ramosas, tomentosas emittens.

Stipes pedalis, bipedalis et ultra, erectus, semiteres, nitidissimus, fuscus, hinc canaliculatus, lævis.

Frons, circumscriptione late ovata, pinnata, pinnis 12—20, oppositis, remotiusculis, patentibus, lanceolatis, apice sublonge attenuatis, basi obliquis, sessilibus, profunde pinnatifidis, infimis bipartitis, breve petiolatis, laciniis oblique patentibus, paululum falcatis, oblongo-lanceolatis, basi latioribus, apice obtusis serratis marginibus soriferis. *Substantia* subcoriaceo-membranacea. *Color* intense viridis, nitidus. *Rachis* universalis fusca, nitida, nuda.

Sori anguste lineares, ad margines, non ad apicem laciniarum.

Involucrum e margine tenui membranaceo, fusco laciniarum formatum, inflexum.

Capsulæ fuscæ, globosæ, sublonge pedicellatæ.

Semina triangulari-globosa, rufo-fusca.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

A very common inhabitant of the West Indies, and we think liable to some variation in the relative length and breadth of the pinnæ.

The East Indian *Pteris nemoralis* of Willdenow, and the *Pt. amœna* of Kaulfuss, seem to approach very near to this, which is however confined wholly to the islands of the West Indies.

TAB CXLIII

Dávallia Boryana!

Fitzroy. delt.

Swan. Sc.

TAB. CXLIII.

DAVALLIA BORYANA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *DAVALLIA,* Sm. *Sori* subrotundi (vel in lineola verticali) margini plerumque approximati. *Involucrum* superficiarium, ex apice venæ unicæ ortum, lateribus vel lata basi adnatum, exterius et verticaliter liberum. *Br.*

Davallia *Boryana;* fronde pinnata, pinnis dimidiato-oblongis obtusis basi truncatis, margine superiore inciso-crenatis soriferis, caudice longe repente.

Davallia Boryana. *Presl. in Reliq. Hænk. fasc.* 1. *p.* 66. *Spreng. Syst. Veget. v.* 4. *p.* 119.

Dicksonia repens. *Bory Voy. v.* 2. *p.* 323. *Swartz. Syn. Fil. p.* 138. *Willd. Sp. Pl. v.* 5. *p.* 482.

Hab. In arboribus Insulæ Barboniæ. *Bory.* Insula Mauritii. *Neraud, Telfair, Wallich.* Insulis Philippinis. *Hænke.*

Caudex in truncis arborum longe repens, crassitie pennæ passerinæ, ramosus, valde squamosus, squamis fuscis, nitidis, hic illic radicans, radicibus fusco-tomentosis.

Stipes sub-biuncialis, flavo-fuscus, nitidus, nudus vel subpaleaceus.

Frons pedalis, circumscriptione lanceolata, longe attenuata, flexuosa, pinnata, pinnis alternis subuncialibus, pallide viridibus, tenui-membranaceis, dimidiato-oblongis, obtusis, basi truncatis, margine inferiore integerrimis, superiore inciso-crenatis; lobulis soriferis, pallide viridibus, nervosis; nervo primario, seu costa, tenui, laterali, ad marginem inferiorem pinnæ, reliquis obliquis, furcatis.

Sori subrotundi, ad basin lobulorum, marginis superioris pinnarum, venas terminantes.

Involucrum suborbiculare, tenue, membranaceum, convexum, basi affixum, margine superiore lateribusque liberis.

Capsulæ sphæricæ, sublonge stipitatæ. *Stipites* capsulis duplo longiores.

Semina subglobosa, angulata, pallide fusca, subpellucida.

Fig. 1. Pinna. f. 2. Portio soriferæ pinnæ. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This very graceful and beautiful Fern has been communicated to us from the Mauritius, both by Mr. Telfair and Dr. Wallich, where it appears to be not uncommon. Hænke discovered it in the Philippine Islands, where the fronds attain the height of two feet. We possess from the Herbarium of the Horticultural Society what we consider another species, and nearly allied to the present, gathered by Mr. Macrae in the crater of the volcano at Owhyhee. This corresponds in size with the plant of Hænke; but it is of a far more rigid texture than *D. Boryana,* and has the upper margin of the pinnæ much more regularly crenated, each tooth or lobule soriferous, so that the fructification forms a regular line or chain along the upper edge.

The fructification will be found to be considerably different from that of the other well-known *Davalliæ,* coming near to that of *Lindsæa,* with which genus this plant agrees in habit.

Greville Del.

Lindsæa cultrata.

TAB. CXLIV.

LINDSÆA CULTRATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *LINDSÆA,* Dryand. *Sori* lineares, margine paralleli sæpiusque approximati. *Involucrum* ex apicibus venarum (una plurium) ortum ducens, exterius liberum. *Br.*

Lindsæa *cultrata;* fronde pinnata, pinnis dimidiato-oblongis obtusis basi truncatis margine superiore lato-crenatis soriferis.

Lindsæa cultrata. *Swartz. Syn. Fil. p.* 119. *Willd. Sp. Pl. v.* 5. *p.* 422. *Schkuhr Fil. p.* 105. *t.* 114. *Spreng. Syst. Veget. v.* 4. *p.* 79. *Blume Enum. Pl. Jav. v.* 1. *p.* 216.

Adiantum cultratum. "*Willd. Phytog.* 14. *t.* 10. *f.* 2."

Hab. In India Orientali. (*Willd.*) Apud Sylhet, Bengaliæ Orientalis, 1815. *Wallich.* In montosis insulæ Javæ. *Blume.*

Caudex repens, squamosus, valde radicosus, radicibus fibrosis, ramosis, nigris.

Stipes digitalis ad spithamæam, nitidus, glaber, basi subpaleaceus, hinc sulcatus.

Frons, circumscriptione lanceolata, attenuata, pinnata, pinnis alternis remotiusculis, semiunciam ad unciam longis, patentibus, dimidiato-oblongis, membranaceis, opacis, obtusis, basi truncatis, margine inferiore integerrimis, superiore late crenatis, lobulis soriferis, venas dichotomas terminantibus.

Involucra terminalia, marginalia, transversim oblonga, vel sublinearia, membranacea, exterius dehiscentia.

Capsulæ sublonge stipitatæ, in sinu involucri insertæ, globosæ, fuscæ.

Semina subrotunda, pallide fusca.

Fig. 1. Pinna fructificans. f. 2. Sorus. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

The affinity of this plant with that given in the preceding Plate (CXLIII.) of this Number, *Davallia Boryana,* must strike any one on the slightest examination: yet as the respective genera are now constituted, they cannot be arranged together. This proves the justness of Mr. Brown's remarks in the *Prodromus Floræ Novæ Hollandiæ,* where he says, "In methodo naturali genus (*Davallia*) in quatuor phalanges distribuendum, quarum tres respective affines *Lindsææ, Dicksoniæ,* et *Nephrodio.*"

Our finest specimens of this plant are from the Honourable the Directors of the India Company, gathered at Sylhet by Dr. Wallich.

TAB CXLV

Acrostichum dimorphum?

P. Greville Delt.

Swan Sc.

TAB. CXLV.

ACROSTICHUM DIMORPHUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) l. ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *dimorphum;* frondibus simplicibus lanceolatis obtusis profunde serrato-dentatis, fertilibus integerrimis, stipite longo squamoso.

Hab. Ex Insula Sanctæ Helenæ misit *Alex. Walker, Insulæ Præfectus.* Apud Madras legit — *Shuter, M.D.*

Caudex repens, subcrassus, valde squamosus, radicosus, radicibus fibrosis ramosis nigro-fuscis.

Stipites digitales et ultra, erecti, flexuosi, subnitidi, graciles, hinc canaliculati, paleacei, squamis sparsis, fuscis, patentibus.

Frondes lanceolatæ, obtusæ, basi attenuatæ, coriaceo-membranaceæ, costatæ, venosæ, venis furcatis, obliquis: *steriles* digitales ad palmares, subpellucidæ, virides, margine ubique grosse et inæqualiter dentato-serratæ: *fertiles* minores, duas ad tres uncias longæ, coriaceæ, fuscæ, margine omnino integerrimæ.

Capsulæ totam inferiorem partem frondis tegentes, fuscæ, globosæ, brevi-stipitatæ.

Semina subglobosa, tuberculata, fusca.

Fig. 1. Frondes steriles. f. 2. Frondes steriles cum fertili. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

It is singular that this Fern, one of the most distinct in the genus *Acrostichum,* and which I have received from Brigadier-General Walker, the late Governor of St. Helena, gathered in that island, and from the late Dr. Shuter, gathered at Madras, should never have been described by any Botanist. It is remarkable for its deeply and irregularly toothed margin, for the strong veining and semi-transparency of the barren frond; whilst the fertile one is quite entire at the margin, and similar to that of many other simple-fronded species of the genus.

Acrostichum ovatum.

D.r Greville Delt

Swan Sc

TAB. CXLVI.

ACROSTICHUM OVATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) l. ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *ovatum;* ubique paleaceo-squamosum, squamis profunde laciniatis, frondibus exacte ovatis obtusis sublonge petiolatis, fertilibus conformibus, caudice valde ramoso repente.

Hab. In Monte Cayambe, Andium Peruvianorum, alt. circiter 6,400 ped., truncos fruticum investiens. *D. Prof. Gul. Jameson.*

Tota *Planta,* nisi pars inferior frondis fertilis, squamosa, squamis paleaceis ferrugineis insigniter laciniato-pinnatifidis tecta.

Caudex valde ramosus, crassiusculus, repens, hic illic radiculosus, frondes plurimas emittens.

Stipes duas uncias longus, nonnunquam multo brevior, gracilis, erectus.

Frons vix unciam longa, exacte ovata, obtusa, coriacea, plana, viridi-fusca; *fertilis* sterili conformis, margine omnino integerrimo: costa distincta, venis nullis.

Capsulæ totam superficiem inferiorem tegentes, globosæ, fuscæ, annulo lato cinctæ, brevi pedicellatæ.

Semina ovali-subglobosa, subtuberculata, reticulata, flavo-fusca.

Fig. 1. Squamæ frondis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

There are few spots on the globe, if we may judge from the plants we have received from Professor William Jameson of Quito, that can yield so great a number of new and curious species of Ferns as the Peruvian Andes. The present is one among the many novelties which that gentleman has been so good as to communicate to us. It is probably allied to *Acrost. reptans* of Cavanilles, a native of Quito, which has not the caudex radicant and the fronds ovate, but acute and ciliated, and the fertile ones are linear.

Asplenium Anceps

D.r Greville Del.t

TAB. CXLVII.

ASPLENIUM OBOVATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *obovatum;* fronde lanceolata bipinnata, pinnis obovatis oblongisve plerisque confluentibus obsolete crenato-dentatis, soris distinctis.

Asplenium obovatum. *Viviani Fl. Lib. Specim. p.* 68. *Spreng. Syst. Veget. v.* 4. *p.* 88.

Hab. In Corsica; in Monte "La Trinita." *Viviani.* In rupibus prope Laconi. *Muller.*

Radix densissime cæspitosa, e fibris numerosis, valde implicatis, ramosis, subtomentosis.

Stipes uncialis ad biuncialem, erectus, flexuosus, superne viridis, basi nigro-fuscus, nitidus, nudus.

Frons digitalis ad palmarem, circumscriptione lanceolata, bipinnata, pinnis primariis horizontalibus, unciam longis, oblongis, basi pinnatis, superne pinnatifidis, pinnulis obovatis vel oblongis, vix petiolatis, obtusis, obsolete crenato-dentatis, laciniis rotundatis, obtusis.

Sori oblongi, demum convexi, remoti, distincti, nunquam confluentes.

Involucrum parvum, lineari-oblongum, demum capsulis numerosissimis obliteratum.

Capsulæ globosæ, longe pedicellatæ.

Semina globosa, fusca, marginata, margine, vel limbo, pellucido, crenato.

Fig. 1. Pinna. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This is one of the many rare plants for which the Herbaria of European Botanists are indebted to the German "*Unio Itineraria.*" Viviani first described it as a native of Corsica; and Muller (one of the collectors of the above-mentioned valuable Institution) detected it on rocks near Laconi in Greece.

The general habit of the fully grown plant resembles the *Asplenium lanceolatum;* but the acute segments to the pinnules and lobes of that plant will always distinguish them. In the younger specimens, before the pinnæ are fully developed, they are simply pinnated, and in that state the plant has a great affinity with *Asplenium viride.*

Hymenophyllum cristatum?

Dr Greville Delt

Swan Sc

TAB. CXLVIII.

HYMENOPHYLLUM CRISTATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *cristatum*; fronde oblonga pinnata, pinnis bipinnatifidis, segmentis linearibus obtusis costaque dorso aculeato-serratis, soris rotundatis bipartitis spinuloso-ciliatis.

Hab. In Monte Cayambe, Andium Peruvianorum, ad truncos arborum; altit. 2500 hexap. prope limites nivis perpetuæ. 1828. *D. Prof. Gul. Jameson.*

Caudex repens, gracilis, filiformis, hic illic radicans, radicibus hirsutis.

Stipes subuncialis, teres, nudus, gracilis.

Frons digitalis ad palmarem, circumscriptione oblonga, pinnata, pinnis oblongis, bipinnatifidis, glabris, fuscis, superioribus decurrentibus, laciniis linearibus, obtusis, pulchre reticulato-venosis, costatis, margine spinuloso-serratis, costa subtus rachique spinulis vel serraturis membranaceis latis acutis cristatis.

Sori majusculi, marginales, prope basin pinnarum superiorum, sessiles.

Involucrum orbiculare, bivalve, dorso utrinque convexum, marginibus planis ciliato-spinosis.

Receptaculum perbreve, globosum.

Capsulæ peltatæ, annulo transversali completo cinctæ, sessiles.

Semina ovalia, subangulata, obscure reticulata, pallide flava, pellucida, granulis minutissimis numerosissimis mixta.

Fig. 1. Portio pinnæ. f. 2. Portio altera: *magis aucta.* f. 3. Involucrum. f. 4. Receptaculum capsularum. f. 5. Semina cum granulis:—*magn. auct.*

For this highly interesting addition to the genus *Hymenophyllum* we are likewise indebted to our friend Professor William Jameson. It is distinguished no less by the serrated or spinulose crested midrib and rachis, than by the large and conspicuous involucres.

Trichomanes incisum.

D.r Greville Del.t *Swan Sc*

TAB. CXLIX.

TRICHOMANES KRAUSII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *Krausii;* frondibus lanceolatis sessilibus vel in stipitem decurrentibus, pinnatifidis stellato-pilosis, laciniis oblongis obtusis grosse dentatis, caudice repente ramoso nigro-tomentoso.

Hab. In Insula Dominica. *Kraus. M.D.*

Caudex longe repens, ramosus, ubique dense tomentosus, tomento nigro.

Stipes brevis, vel subnullus.

Frons sub-biuncialis, lanceolata vel oblonga, profunde pinnatifida, membranacea, subpellucida, venosa atque pulcherrime reticulata, laciniis oblongis obtusis, grosse dentatis, margine hic illic stellato-pilosis.

Sori solitarii, terminales.

Involucrum oblongum, immersum, ore bilabiato, obtuso, integerrimo, libero.

Receptaculum (fide Kaulfusii) longissimum, flexuosum.

Capsulæ peltatæ, annulo integro cinctæ.

Semina pallide flava, pellucida, oblongo-ovalia, subangulata.

Fig. 1. Frons. f. 2. Lacinia cum soro. f. 3. Portio laciniæ: *magis aucta.* f. 4. Receptaculi pars inferior. f. 5. Capsula. f. 6. Semina:—*magn. auct.*

Specimens of this Fern were communicated by Dr. Kraus from Dominica. It has a near affinity, certainly, with the *Tr. sinuosum;* but our plant is much smaller, more deeply pinnatifid, and with more divided segments. The *Tr. incisum* of Kaulfuss approaches it in size and general habit; but that species seems to us scarcely distinct from the true *Tr. sinuosum.*

2

3

1

Asplenium Douglasii.

Dr. Greville del.

Swan Sc.

TAB. CL.

ASPLENIUM DOUGLASII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM,* Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero.

Asplenium *Douglasii;* fronde simplici cordato-ovata breviter acuminata integerrima, soris geminatis.

Hab. Prope Rio de Janeiro. *D. Douglas;* ubi etiam legit *D. Miers.*

Caudex non visus.

Stipes 6—8-pollicaris, erectus, flexuosus, subteres, hinc sulcatus, nudus vel ad basin solummodo paleaceo-squamosus.

Frons spithamæa, cordato-ovata, breviter acuminata, membranacea, basi sinu profundo, margine subundulata, ubique integerrima, costata, nervosa, nervis patentibus basi dichotomis, marginem versus anastomosantibus, reticulatis.

Sori longi, lineares, strictissimi, dichotomis venarum inserti, et hinc per paria approximati.

Involucrum lineare, angustum, demum capsulis numerosissimis omnino tectum.

Capsulæ globosæ, fuscæ, longe stipitatæ.

Semina intense fusca, ovali-rotundata, angulata, limbata, limbo pellucido, flavo.

Fig. 1. Portio frondis cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

The habit of this fine new Fern is so entirely that of a *Scolopendrium,* that until I had removed the capsules from the sorus, and carefully examined the involucre, I could not persuade myself that it was any other genus. This involucre, however, is clearly that of an *Asplenium.* The species was first brought to our knowledge by Mr. David Douglas, who, on the voyage to the North-West Coast of America, remained a few days at Rio Janeiro; where he was no less steadily engaged in furthering the object of the Horticultural Society, than he was on the banks of the Columbia and in the Rocky Mountains. We have much pleasure, therefore, in dedicating the present species to that zealous Naturalist, whose career we have watched with no ordinary satisfaction for some years past, and who promises to do yet more for science in another extensive mission.

Sheilanthes squamosa

Fraser delt. *Swan Sculp.*

TAB. CLI.

CHEILANTHES SQUAMOSA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *CHEILANTHES*, Sw. *Sori* marginales, punctiformes; capsulis sinu involucri insertis. *Involucrum* marginale, interius liberum, scariosum, v. e crenula ipsius marginis replicata formatum. *Br.*

Cheilanthes *squamosa;* fronde ovato-lanceolata bipinnata, pinnulis oblongo-ovatis obtusis sinuato-lobatis, subtus rachi stipiteque densissime squamosis, soris subcontinuis.

Cheilanthes squamosa. *Gillies, MSS.*

Hab. In rupibus apud "Cerro del Morro, San Luis," provincia Bonariæ. *J. Gillies, M.D.*

Radix, ut videtur, cæspitosa, e fibris descendentibus, fuscis, ramosis.

Stipites plurimi ex eodem puncto, biunciales, erecti, dense paleaceo-squamosi, squamis patentibus vel subsquarrosis.

Frondes digitales, circumscriptione ovato-lanceolatæ, bipinnatæ, pinnis *primariis* lanceolatis, patentibus, sesquiuncialibus, *pinnulis* brevissime petiolatis, ovatis seu oblongis, basi truncatis, sinuato-lobatis, subcoriaceis, supra intense viridibus, glabris, nudis, subtus rachique ubique paleis ovato-acuminatis membranaceis reticulatis ciliato-dentatis subpeltatis squamosis.

Sori marginales, subcontinui, tenues, squamis omnino tecti.

Involucrum tenue, e margine inflexo pinnulæ, subcontinuum, sinuatum.

Capsulæ globosæ, annulo lato incompleto cinctæ, vix pedicellatæ.

Semina ovali-globosa, subangulata, opaca, flavo-viridia.

Fig. 1. Pinnulæ, squamis in partem denudatæ. f. 2. Portio sori. f. 3. Squama. f. 4. Capsula. f. 5. Semina:—*magn. auct.*

We can find no description of any *Cheilanthes* which at all accords with this very handsome species. Hence we have much pleasure in adopting the appropriate name given to it by its discoverer.

Asplenium Petrarchæ

D'Urville del.
Swan Sculp.

TAB. CLII.

ASPLENIUM PETRARCHÆ.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *Petrarchæ*; frondibus lineari-oblongis ubique glanduloso-pilosis pinnatis, pinnis oblongis pinnatifidis, basi cuneatis, laciniis obtusis dentatis, stipite rachique inferne nigris.

Asplenium Petrarchæ. *Spreng. Syst. Veget. v.* 4. *p.* 86.

Asplenium glandulosum. "*Loiseleur*" (*Spreng.*).

Asplenium Vallisclausæ. *Requien in Descr. de la Font. de Vaucl. ed.* 2. *p.* 239.

Polypodium Petrarchæ. *Requien in Descr. de la Font. de Vaucl. ed.* 1.

Hab. In rupibus siccis Galliæ australis, prope fontem Vallisclausæ. *Requien; Bentham; Arnott.* Ad rupes prope Monspeliam. *Requien; Bentham.*

Radix parva, cæspitosa, fibrosa, fibris brevibus intertextis, ramosis.

Stipites plurimi, ex eodem puncto, vix semiunciam longi, nigri, nitidi, glanduloso-pilosi.

Frondes bi-triunciales vel paulo altiores, circumscriptione lineares vel oblongo-lineares, pinnatæ, pinnis remotiusculis, plerumque alternis, oblongis vel ovato-oblongis, obtusis, obsolete nervosis sessilibus, basi cuneatis, pinnatifidis, lobis rotundatis, obtusis, dentatis crenatisque, viridibus, utrinque glanduloso-pilosis, glandulis fulvis. *Rachis* ubique piloso-glandulosa, superne viridis, inferne nigra, nitida.

Sori oblongi, demum subconfluentes.

Involucrum lineari-oblongum, membranaceum, pallide fuscum.

Capsulæ sublonge pedicellatæ, fuscæ, annulo lato cinctæ.

Semina ovalia, intense fusca, limbata, limbo corrugato.

Fig. 1. Pinna. f. 2. Capsulæ. f. 3. Pili glandulosi. f. 4. Semina:—*magn. auct.*

This may well be reckoned among the very rarest of the European Filices, nor has it yet been introduced into any general work on Ferns, save the recently published one of Sprengel, the 4th volume of his *Systema Vegetabilium*, where the name of *Petrarchæ* of DeCandolle is chosen in preference to those of *glandulosum* of Loiseleur, and *Vallisclausæ* of Requien in the 2nd edition of his "Description of the Fountain of Vaucluse." The last author appears to have been its original discoverer, and he named it in the first instance *Polypodium Petrarchæ*. He afterwards, in company with M. de Suffren, gathered it in Provence, and then changed the specific name to *Vallisclausæ*.

Our specimens were gathered by Messrs. Arnott and Bentham at Vaucluse, and by the latter gentleman near Montpellier, always growing on very hot, dry, and exposed perpendicular faces of the rocks, where it is difficult, on account of the brittle nature of the fronds, to select good specimens.

Mr. Arnott tells us in his "Tour to the South of France and the Pyrénées," published in Jameson's Edinburgh New Philosophical Journal, April 1826, that at Vaucluse this plant is becoming exceedingly scarce, and that if not protected from the ravages of Botanists it will soon be extinct there.

In habit the species is allied to *A. viride* and *A. Trichomanis*, but abundantly different from both in its much smaller size, longer pinnæ, which are pinnatifid, and especially in the curious, pedicellated glands, with which the whole plant is clothed to such a degree as to give it a hoary appearance.

2

1

Gymnogramma triangularis.

D.r Greville delt.

Swan. Sc.

TAB. CLIII.

GYMNOGRAMMA TRIANGULARIS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *GYMNOGRAMMA,* Desv. *Capsulæ* venis frondis furcatis insidentes. *Indusium* nullum. *Kaulf.*

Gymnogramma *triangularis ;* frondibus triangularibus pinnatis, pinnis oppositis adnatis pinnatifidis, inferioribus margine exteriori pinnato-pinnatifidis, pinnula infima lineari-deflexa, laciniis ovatis obtusis subtus flavo-farinosis.

Gymnogramma triangularis. *Kaulf. Enum. Fil. p.* 75. *Spreng. Syst. Veget. v.* 4. *p.* 39.

Hab. In California. *Chamisso.* In montibus excelsis, intra locos "*Grand Rapids*" et "*Great Falls*" dictos, fluminis Columbiæ, et in Monte "*Hood*" ad oram occidentalem Americæ Septentrionalis copiose legit *D. Douglas.*

Radix fibroso-cæspitosa, fibris ramosis, nigris.

Stipites cæspitose crescunt, digitales ad spithamæam, teretes, hinc plani, atro-purpurei, nitidissimi, nudi vel hic illic spina brevi acuta instructi.

Frondes circumscriptione deltoideæ, pinnatæ. *Pinnæ* oppositæ; adnato-sessiles, superioribus coadunatis, linearilanceolatis, obtusis pinnatifidis; *inferiores,* margine exteriori pinnato-pinnatifidæ, pinnis elongatis, infimis reflexis; laciniis ovatis obtusis subtus pulvere flavo tectis. *Rachis Costa*que atro-purpureæ.

Sori, in venis ramosis, demum confluentes.

Capsulæ globosæ, fuscæ, subsessiles, annulo lato cinctæ.

Semina minutissima, globoso-triangularia, subreticulata, pallide viridia.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

Two states of this plant are found by Mr. Douglas: the one, smaller and destitute of spinous processes upon the stipes; the other (as now figured), larger, and furnished here and there, on the stipes, with short spines, which perhaps may be considered as abortive pinnæ.

The habit of the plant, as Dr. Kaulfuss well observes, is that of *Pteris argentea;* and the rich yellow dust with which the underside is clothed is common to other plants of the present genus.

Déparia Macraei

Dr Greville del.^t

Swan Sculp.^t

TAB. CLIV.

DEPARIA MACRAEI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *DEPARIA,* Hook. & Grev. *Sori* subglobosi in dentibus ad margines frondis, venulas terminantes. *Involucrum* infra sorum insertum, pateriforme, membranaceum, margine sublaceratum.

Deparia* *Macraei.*

Hab. In Insula Owhyhee. *Macrae.*

Frons simpliciter pinnata? pinnis alternis, lineari-lanceolatis, sessilibus, glabris, membranaceis profunde pinnatifidis, apice acuminatis serratis, laciniis oblongis obtusis serratis, costatis oblique nervosis. *Rachis Costa*que primaria, glabræ, fuscæ.

Sori ad margines laciniarum, venulas vel nervos terminantes, in serraturis siti, subglobosi.

Involucrum sub sorum insertum, pateriforme, membranaceum, margine sublaceratum.

Capsulæ globosæ, fuscæ, sublonge pedicellatæ, annulo fere completo cinctæ.

Semina ovalia, opaca, limbata, limbo denticulato, pallide fusco-viridia.

Fig. 1. Portio pinnæ, cum soris. f. 2. Sorus. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

We are indebted to the liberality of the Horticultural Society for this, as well as for several other new and rare Ferns, which were gathered in different parts of the world by their collector Mr. Macrae. Of the present individual, however, we possess but a portion of the frond, and are neither able to speak as to the extent to which the whole may attain, nor to the form of its outline or circumscription; nor whether, as is probable, it belongs to the tribe of the *tree Ferns.* It seems allied to the *Cyatheæ:* but what is the appearance of the involucre in a younger state, as compared with that which is here figured, we have no means of ascertaining. Still we possess the fructification sufficiently perfect to determine that it does not correspond with any hitherto described genus of Ferns.

* Nomen à δεπας *patera;* from the singular appearance of the involucre.

Trichomanes Bojeri

P. Greville del.

Swan Sculp.

TAB. CLV.

TRICHOMANES BOJERI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *Bojeri;* fronde simplici flabelliformi membranacea radiatim nervosa glabra lobata, lobis rotundatis subcrenatis soriferis, involucris omnino immersis, stipite elongato.

Hab. In sylvis umbrosis, ad arborum truncos, in Insula Mauritii. *D. Prof. Bojer.*

Plantæ dense cæspitosæ.

Caudex filiformis, repens, ramosus, ramis intertextis tomentosis.

Stipites unciam ad sesquiunciam longi, erecti, graciles, glabri, flexuosi, teretes.

Frondes semiunciam fere ad unciam longæ, forma mire variant; plerumque flabelliformes, rarius reniformes, nonnunquam rotundatæ, inferne truncatæ, vel etiam oblongæ, basi cuneatæ, membranaceæ, atro-virides, minute reticulatæ, areolis subquadratis, tenui-marginatæ, dichotome et radiatim venosæ; venis alternantes, venulæ obsoletæ iis parallelæ; lobatæ, lobis inæqualibus, plerumque rotundatis, obtusis, obscure crenatis vel sinuatis, summis soriferis.

Sori lobos occupantes, plerumque duo vel tres in singulo lobo.

Involucra nervos terminantia, substantia frondis immersa, cylindracea, basi attenuata, superne dilatata, brevissime bilabiata, integerrima.

Receptaculum filiforme, rectum, involucro duplo longius.

Capsulæ, quoad structuram, ut in reliquis hujusce generis, versus basin receptaculi insertæ.

Semina subglobosa, obscure angulata, flavo-fusca.

Fig. 1. Frons fructifera. f. 2. Portio frondis cum soro. f. 3. Receptaculi pars inferior, cum capsulis. f. 4. Semina:—*magn. auct.*

This grows in dense tufts, and in a dry state has an appearance not unlike that of *Jungermannia epiphylla.* As a species of *Trichomanes* it comes near, perhaps, to the *Tr. parvulum* of Poiret (*T. Sibthorpioides* Willd.), and to the *T. minutum* of Blume: but both these, according to the descriptions, are considerably smaller in size and have much deeper laciniæ. Still these simple-fronded species of the genus are so variable in the outline of the frond, that without figures or very full descriptions it is scarcely possible to determine the species intended by authors.

Gymnogramma cordata.

Dr Greville Del.

Swan Sc.

TAB. CLVI.

GYMNOGRAMMA CORDATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *GYMNOGRAMMA,* Desv. *Capsulæ* venis frondis furcatis insidentes. *Indusium* nullum. *Kaulf.*

Gymnogramma *cordata;* fronde lanceolata pinnata, pinnis cordato-ovatis pinnatifidis, lobis ovato-rotundatis subtus stipiteque paleaceo-squamosis.

Gymnogramma cordata. *Schlecht. Adumbr. Pl. p.* 16. *Spreng. Syst. Veget. v.* 4. *p.* 38.

Grammitis cordata. *Swartz. Syn. Fil. p.* 23. & 217. *Willd. Sp. Pl. p.* 142.

Ceterach crenata. *Kaulf. Enum. Fil. p.* 85.

Acrostichum cordatum. *Thunb. Fl. Cap. p.* 732.

Asplenium cordatum. "*Swartz. in Schrad. Diar. Bot.* 1801. *p.* 54."

Hab. Ad Promontorium Bonæ Spei. In montis tabularis parte septentrionali, rupe Flachelip; unde misit *D. Mund.*

Caudex, ut videtur, brevis, squamosus, radices numerosas fibrosas ramosas cæspitosas emittens.

Stipes brevis, vix unciam vel sesquiunciam longus, atro-purpureus, nitidissimus, squamosus, squamis deciduis.

Frondes palmares, fere ad spithamæam, circumscriptione lanceolatæ, pinnatæ, pinnis remotiusculis, alternis, subcoriaceis, cordato-ovatis, vix nervosis, pinnatifidis, supra viridibus, subtus densissime paleis ovatis acuminatis membranaceis reticulatis fuscis tectis, lobis late ovatis, subcrenatis.

Rachis atro-purpurea, nitida, squamosa.

Sori in duas lineas obliquas costam versus dispositi, oblongi, tumidi.

Capsulæ globosæ, fuscæ, brevi-pedicellatæ.

Semina flavo-fusca, subovalia, limbata, reticulata, limbo crenato.

Fig. 1. Pinnæ portio cum soris. f. 2. Squama frondis. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This handsome Fern, like its ally *Gymnogramma Ceterach,* has been placed in various genera, according to the views of different Botanists in regard to its fructification. The one, indeed, to which we have referred it, differs from *Grammitis* rather in its habit and more divided fronds than in its sori, and is scarcely tenable.

The species we believe to be wholly confined to the southern extremity of Africa.

Pleopeltis pinnatifida.

D.r Greville del.t

Swan.Sc

TAB. CLVII.

PLEOPELTIS PINNATIFIDA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *PLEOPELTIS,* Humb. *Sori* subrotundi, sparsi. *Indusia* numerosa, peltata, squamiformia, subimbricata. *Kaulf.*

Pleopeltis *pinnatifida;* fronde lanceolata profunde pinnatifida, laciniis oblongis obtusis subtus stipiteque squamoso-paleaceis.

Pleopeltis pinnatifida. *Gillies, MSS.*

Hab. Apud "El Cerro del Morro, San Luis," provincia Bonariæ, Am. Merid. *J. Gillies, M.D.*

Caudex repens, crassitie pennæ corvinæ, fibras numerosas ramosas subtomentosas emittens.

Stipites tripollicares, erecti, flexuosi, flavo-fusci, squamulosi.

Frondes longitudine stipitum, vel longiores, circumscriptione lanceolatæ, subcoriaceæ, profunde pinnatifidæ, enerves, laciniis oblongis, vix unciam longis, oblique patentibus, obtusis, superne viridibus, glabris, subtus pallidioribus squamulosis; *squamis* cordato-ovatis, acuminatis, peltatis, inæqualiter dentatis, membranaceis, reticulatis, fuscis.

Involucra e squamis iis frondium simulantia, sed stipite brevi insidentia.

Capsulæ numerosæ, rufo-fuscæ, longe pedicellatæ, annulo lato cinctæ.

Semina oblonga, vel subreniformia, pallide flavo-viridia.

Fig. 1. Portio segmenti frondis, a dorso visa. f. 2. Capsulæ. f. 3. Semina. f. 4. Involucri squama subtus visa. f. 5. Eadem superne visa:—*magn. auct.*

This plant has the habit of small plants of *Polypodium vulgare,* but it is a true *Pleopeltis,*—a genus, it must be confessed, not well distinguished from *Polypodium.*

Cryptogramma Brunoniana

Sweet Sculp.

CRYPTOGRAMMA BRUNONIANA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *CRYPTOGRAMMA*, Br. *Sori* lineares (vel subrotundi) venulis costæ (pinnulæ) obliquis insidentes. *Capsulæ* pedicellatæ, receptaculo communi elevato nullo. *Involucrum* commune (pinnulæ) marginale, continuum, disco venoso, margine scarioso libero sæpius induplicato; partiale nullum.

Filiculæ *glabellæ;* frondibus *cæspitosis bi-tripinnatifidis: centralibus mutato-contractis fertilibus, exterioribus sterilibus:* involucris *dorsum totum pinnulæ tegentibus:* capsulis *breve pedicellatis, annulo incompleto:* sporulis *obtuse trigonis, lævibus.* Br.

Cryptogramma *Brunoniana;* frondibus *sterilibus* tripinnatifidis laciniis lineari-oblongis bifidis acutissimis, *fertilibus* bi-tripinnatis, pinnulis oblongo-ellipticis profunde serratis, demum (fructiferis) subintegerrimis.

Cryptogramma Brunoniana. *Wallich, MSS.*

Hab. In alpibus summis "Kumaun" dictis legit *Robertus Blinkworth* A.D. 1826; communicavit *Wallich.*

Radix cæspitosa; e fibris numerosis, longis, filiformibus, ramosis, nigris descendentibus.

Stipites plurimi ex eadem radice, erecti, subteretes, glabri, digitales vel in frondibus fructiferis subpalmares.

Frondes steriles, circumscriptione ovatæ, duas vel tres uncias longæ, tripinnatifidæ, glabræ, submembranaceæ, laciniis lineari-oblongis, acutis, integerrimis, plerumque bifidis, acutissimis, nervo medio ante apicem evanescente, in glandula oblonga terminante, instructis: *fertiles* primum ovatæ, bi-triunciales, demum magis elongatæ, bi- quandoque tri-pinnatæ, pinnulis junioribus ovato-ellipticis, profunde et acute crenato-serratis, acutis, penninerviis, venulis simplicibus vel dichotomis, apice clavato-glandulosis, ante marginem evanescentibus: *fructificantes* margine seu involucro revoluto subintegerrimo, oblongæ, tandem, capsulis maturis, marginibus explanatæ. *Rachis* ubique tenui-alata, glabra.

Sori oblongi, ex apicibus clavatis venularum progredientes, demum totam fere paginam inferiorem pinnulæ tegentes.

Involucrum commune, e margine lato subintegro revoluto usque ad nervum medium attingente formatum, submembranaceum, demum explanatum.

Capsulæ brevissime pedicellatæ, globosæ, fuscæ, annulo lato fere completo cinctæ.

Semina numerosa, pallide fusca, obtuse trigona.

Fig. 1. Planta (*magn. nat.*) cum fronde sterili, fronde fertili juniore et frondibus tribus fructiferis magisque elongatis. f. 2. Portio frondis sterilis. f. 3. Pinnæ frondis fertilis junioris. f. 4. Pinna fructifera, margine seu involucro nondum explanato. f. 5. Portio pinnæ fructiferæ marginibus explanatis, sorisque in conspectu provenientibus:—*magn. auct.*

Amongst the extensive and valuable collection of Asiatic Ferns made by Dr. Wallich under the direction of the Honourable the Directors of the East India Company, and which have been so liberally tendered to the use of the present work, few have given us more pleasure than a species of *Cryptogramma,*—the subject of the present plate,—which was detected on the lofty "Kumaun," a part of the great range of the Himala mountains, by Robert Blinkworth, one of the collectors in the employ of the Botanic Garden at Calcutta, under Dr. Wallich. And this too, though from so very remote a country, is yet *almost* identical with that of Nootka Sound and Subarctic America. The only difference exists in the sterile fronds: for the young state of the fertile fronds is exactly similar to the sterile ones of *C. acrostichoides.*

Dr. Wallich accompanied the specimens with the remark, "Dedicavi speciem conditori generis immortali, amico æstimatissimo:" and we think ourselves honoured in being permitted to give publicity to so interesting a plant, which bears the name of the greatest Botanist of this or any other age or country.

Since the above was written, we have received still another species of *Cryptogramma* from the vicinity of Quito, and which we propose naming after its discoverer Professor William Jameson of Quito. Its character may stand thus:

Cryptogramma *Jamesoni;* frondibus fertilibus tri-subquadripinnatis, pinnulis linearibus obtusis rachique alata glanduloso-ciliatis.

Hab. In rupibus prope urbem Quito.

Numerous fronds spring from the same root: but in our specimens there are no barren ones.

TAB. CLIX.

Marsilea vestita

Dr Greville del.

Swan Sculp.

MARSILEA VESTITA.

FILICES.—Marsileaceæ. *Br.* Rhizospermeæ. *Roth., DeCand., Spreng.*
Hydropterides. *Willd.*

Gen. Char. *MARSILEA,* Schreb., Br. *MARSILEÆ* Sp., Linn. *LEMMA,* Juss.

Involucrum subovatum, clausum, multiloculare, loculis biseriatis, androgynis. *Antheræ?* numerosæ, confertæ, sessiles, uniloculares, evalves? polline globoso. *Ovaria* serie simplici antheris utrinque stipata, sessilia, ovalia, sub membrana duplici materia granulosa repleta.

Surculus *repens.* Folia *quaternata, elongato-petiolata.* Involucra *petiolo insidentia, v. axillaria, sæpius pedicellata.*

Marsilea *vestita;* foliolis cuneatis subobliquis, petiolisque appressi-hirsutis, involucris ovalibus hirsutis axillaribus pedunculo subæque longis.

Hab. Ad flumen Columbiam, ora occidentali Americæ Septentrionalis. *Douglas, Scouler.*

Surculus, vel *Caudex,* repens, filiformis, subhirsutus, basi præcipue radicosus, radicibus fibrosis, ramosis, descendentibus, nigris.

Frondes numerosæ, 3 vel 4 aggregatæ ex eodem puncto. *Petiolus* (vel *Stipes*) subdigitalis, erectus, filiformis, appresse hirsutus, ad apicem gerens foliola 4, cuneata, adpressa et strigoso-hirsuta, integerrima, subobliqua, patentia. *Pili* articulati, superne attenuati.

Involucra solitaria ad basin singuli petioli, axillaria, ovalia vel quandoque subquadrata, coriacea, hirsuta (demum glabriuscula) subcompressa, basi dorso unidentata, paulo infra apicem pedunculi insidentia, multilocularia, loculis in duas series dispositis, isthmis transversalibus, membranaceis, androgynis. *Pedunculus* hirsutus, involucri longitudine.

Fructificationes biformes. *Antheræ?* et *Capsulæ?* plurimæ in singulo loculo parietales et nervis vel receptaculis parietalibus, ut nobis videtur, ortum ducentes.

Antheræ? parvæ, obovatæ, in stipitem brevem basi attenuatæ, e membrana pellucida, albida, intus granulis parvis globosis flavescentibus repletæ.

Capsulæ? antheris majores, obovatæ, breviter stipitatæ. *Integumentum* duplex. *Exterius* membranaceum, reticulatum, hyalinum, reticulosum: *interius* ovale, album, opacum, inferne tuberculo apiculato terminatum, indehiscens, intus massa gelatinosa atque granulis vel seminibus biformibus, aliis minutissimis angulatis, reliquis multo majoribus subrotundis farctæ.

Fig. 1. Foliolum. f. 2. Involucrum immaturum. f. 3. Idem maturum. f. 4. Sectio verticalis. f. 5. Sectio altera. f. 6. Involucrum, hinc verticaliter sectum, vacuum, cum fasciculo vasorum. f. 7. Fasciculus vasorum. f. 8. Capsula cum antheris quatuor. f. 9. Antheræ portio, cum granulis seu polline. f. 10. Pollen. f. 11. Capsula nuda. f. 12. Capsula rupta cum seminibus. f. 13. Pilus:—*magn. auct.*

We are not aware that there have any where been published figures of the fructification of the genus *Marsilea* which can give any idea of the curious structure of the involucrum and its contents. In this respect we trust that our representation will be found useful; though, even here, we must observe that from the small number of *ripe* fruits we had to examine, and the great difficulty of distinguishing the situation of the parts after they had been dried, we do not pledge ourselves that the insertion of the supposed anthers and capsules is here represented with all the accuracy that could be wished. We would rather rely upon the figure of the next species, *M. polycarpa.* The immediate insertion of the fructifications within the involucre is unquestionably upon bundles of vessels, of which the principal one runs vertically along the centre of the back of the involucre, and from each side there branch off several parallel forked bundles, to which the capsules and anthers are attached, and which correspond in number to the cells of the involucre. These bundles of vessels we have been able to remove entire from within the involucre, as shown at fig. 7. The genus *Pilularia* will probably be found to exhibit a somewhat similar structure, when its fructifications shall be examined with the necessary minuteness.

Marsilea polycarpa.

D.r Greville Delt

Swan Sc.

TAB. CLX.

MARSILEA POLYCARPA.

FILICES.—Marsileaceæ. *Br.* Rhizospermeæ. *Roth., DeCand., Spreng.* Hydropterides. *Willd.*

Gen. Char. *MARSILEA*, Schreb., Br. *MARSILEÆ* Sp., Linn. *LEMMA*, Juss. *Involucrum* subovatum, clausum, multiloculare, loculis biseriatis, androgynis. *Antheræ?* numerosæ, confertæ, sessiles, uniloculares, evalves? polline globoso. *Ovaria* serie simplici antheris utrinque stipata, sessilia, ovalia, sub membrana duplici materia granulosa repleta.

Surculus *repens*. Folia *quaternata, elongato-petiolata*. Involucra *petiolo insidentia, v. axillaria, sæpius pedicellata*.

Marsilea *polycarpa;* foliolis lato-cuneatis glabris, petiolis elongatis involucra ovali-globosa brevipedunculata numerosa secunda proferentibus.

Hab. In fossis, apud Demerara, legerunt *C. S. Parker, Arm.* et *Gul. Hancock, M.D.*

Caudex vel *Surculus* repens, filiformis, gracilis, inferne radicans: radicibus numerosis descendentibus elongatis valde fibrillosis.

Frondes ex parte superiore caudicis assurgentes, remotæ. *Petiolus* (vel si mavis *Caudex*) spithamæus et ultra, glaber, erectus, gracilis, hinc semiteres, illinc planus, medio canaliculatus. *Foliola* quaterna in orbem disposita, patentia, lato-cuneata, obtusissima, glabra, integra vel eroso-laciniata.

Involucra numerosa, omnia petiolo insidentia ex uno latere orta, secunda, subbrevipedunculata, ovali-globosa, statu juniore hispido-pilosa, adulta nudiuscula, fusca, edentula, plurilocularia, loculis transversalibus in duas series dispositis, androgynis. *Antheræ* (?) et *Capsulæ* (?) cum ejus seminibus, fere omnino ut in *M. vestita* (Tab. CLIX.).

Fig. 1. Portio petioli cum involucris duobus adultis. f. 2. Involucrum junius. f. 3. Involucrum maturum transversim sectum. f. 4. Idem verticaliter sectum. f. 5. *Capsula?* cum ejus Antheris? f. 6. Anthera? cum polline. f. 7. Capsula? rupta seminaque? f. 8. *Involucrum* cum funiculo vasorum, cui Capsulæ? et Antheræ affixæ:—*magn. auct.*

This most rare and interesting species of *Marsilea* is a native of the tropical parts of South America, and was first made known to us by our valued friend, (whose name we have often had occasion to mention during the progress of this work,) C. S. Parker, Esq. His specimens, indeed, produced only young capsules; but they and the frond were in an excellent stage for examination and description. For the older state of the capsules we are indebted to Dr. William Hancock, who found them in the same country and in the same situation as Mr. Parker found his. The insertion of the fruit is very remarkable, and very unlike any other species of the genus with which we are acquainted.

Botrychium daucifolium.

TAB. CLXI.

BOTRYCHIUM DAUCIFOLIUM.

FILICES.—Ophioglosseæ. *Br., Kaulf., Spreng.* Stachyopterides. *Willd.*

Gen. Char. *BOTRYCHIUM,* Sw. *Capsulæ* distinctæ, in spica disticha composita, respectu cujus transversim quoad insertionem longitudinaliter dehiscens. *Br.*

Botrychium *daucifolium;* scapo superne unifrondoso, fronde lato deltoidea ternata, foliolis petiolatis bipinnatifidis, segmentis ovatis acutiusculis serratis, terminali acuminato, spicis compositis bi-tripinnatis.

Botrychium daucifolium. *Wallich, Catal. of Pl. in Mus. of E. I. C. n.* 49.

Hab. Apud "Kumoon" Indiæ Orientalis, ubi legit *D. Blinkworth; Cl. Wallich* communicavit.

Radix e fibris plurimis simplicibus vel parce ramosis, glabris: bulbo nullo.

Scapi solitarii vel 2 ex eadem radice, spithamæi ad pedalem simplices, erecti, crassitie *pennæ anserinæ*, glabri, superne in frondem expansi.

Frons palmaris et ultra, lato deltoidea, ternata. *Foliola* petiolata, etiam deltoidea, bipinnatifida, inferne etiam subbipinnata, versus apicem pinnatifido-sinuata. *Pinnæ*, vel *segmenta* primaria, lanceolatæ, lobis vel laciniis fere ovatis acutis margine argute sed inæqualiter serratis, costatis, nervosis, nervis obliquis dichotomis ad marginem attingentibus. *Rachis* alata.

Spica frondis longitudine, erecta, composita, bi-tripinnata, gracilis, pinnulis patentibus capsuliferis.

Capsulæ sublaxe dispositæ, globosæ, sessiles, rufo-flavæ, glabræ, demum transversim dehiscentes, bivalves.

Semina pallide flavescentia, hyalina, subtrigona e granulis tribus composita.

Fig. 1. Portio pinnæ. f. 2. Portio spicæ cum capsulis. f. 3. Semina:—*magn. auct.*

This fine species of *Botrychium* is one again for which our collections are indebted to the liberality of the Honourable the East India Company. In the Catalogue of the East Indian Herbarium, printed by Dr. Wallich, it is suggested that this species may probably be a variety of *B. lanuginosum* of Wall., figured at Tab. 69 of this work. It should be observed, that we now possess from the East India Company specimens of *B. lanuginosum* thrice the size of the specimen above figured, but even more deeply and irregularly incised. We know, however, how very liable the European and North American *Botrychia* are to vary in the more or less deeply divided laciniæ of the foliola; and the present may possibly be the perfect state of *B. lanuginosum.*

We possess also, from the southern states of North America, a *Botrychium* which we can scarcely distinguish from this but in its much smaller size.

Neottiodium pubescens

D.r Greville delt

Swan Sc

TAB. CLXII.

NEPHRODIUM PUBESCENS.

FILICES.—Gyrátæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *NEPHRODIUM,* Br. *Sori* rotundi, dorsales. *Involucrum* reniforme, sinu affixum, marginibus liberis. *Br.*

Nephrodium *pubescens;* fronde ovato-deltoidea bipinnata pilosa, pinnis ovatis acutis inciso-dentatis summis subintegris confluentibus, inferioribus pinnatifidis, rachi involucrisque pilosis.

Aspidium pubescens. *Swartz, Syn. Fil. p.* 56. *Willd. Sp. Pl. v.* 5. *p.* 271. *Spreng. Syst. Veget. v.* 4. *p.* 108.

Polypodium pubescens. *Linn. Sp. Pl. p.* 1552.

Polypodium minus subhirsutum, &c. *Brown, Jam. p.* 101.

Hab. In Jamaica. *Brown; Swartz; Dom. Wiles; Dom. Higson.*

Radix a nobis non visa.

Caudex digitalis ad spithamæam, gracilis, fusco-luteus, glaber, nitidus, basi, in juniore planta, sublanatus, teres, hinc sulcatus.

Frons palmaris vel spithamæa, circumscriptione ovato-deltoidea, utrinque nervis margineque pilosa, bipinnata. *Pinnæ primariæ* inferiores digitales, lanceolatæ: *pinnæ secundariæ,* vel *pinnulæ,* ovatæ, alternæ, subsessiles, acutissimæ, *supremæ* subintegerrimæ, *intermediæ* inciso-dentatæ, *inferioribus* majoribus incisis et etiam pinnatifidis, segmentis semper acutis.

Sori pauci, solitarii, subrotundi.

Involucrum reniforme, sinu piloso, pilis articulatis, cito deciduum.

Capsulæ numerosæ, sublonge pedicellatæ.

Semina ovalia, pellucida, subangulata.

Fig. 1. Pinnulæ cum soris vetustis. f. 2. Sorus cum involucro. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Nephrodium pubescens (*Aspidium* of Swartz, and *Polypodium* of Linn.) is one of those plants the identity of which, for want of a good description or figure, must be to us a matter of some doubt. The present plant, which is equally with that species a native of Jamaica, appears to us to agree sufficiently well with the short characters of authors. Our description we accompany with a representation, which, we trust, will at least remove all doubt as to the plant we designate under this name.

It belongs, indeed, to a tribe or group of *Nephrodium,* that is attended with much difficulty in the discrimination of the species which compose it, and which can hardly be understood without accurate figures. It will rank near to our *Aspidium aculeatum:* but is well distinguished by its shorter, more deltoid frond, having the rachis, and nerves, and margins of the pinnules clothed with copious and rather long hairs.

Nephrodium pubescens is one amongst a large and valuable collection, which had been gathered and presented to the Horticultural Society of Jamaica by Mr. Wiles. This collection, in the most liberal manner and with the consent of Mr. Wiles, the Society has transferred to us; and we are anxious thus publicly to render our acknowledgements for so useful and valuable a contribution to our Herbaria.

Polypodium rigidum.

Dr. Greville Del.

Swan Sc.

TAB. CLXIII.

POLYPODIUM RIGIDUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *POLYPODIUM*, Sw. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium *rigidum*; fronde stricta lanceolata bipinnata, pinnulis ovato-rotundatis acutis subpetiolatis, marginibus reflexis denticulatis rigidis, subtus stipite rachique paleaceis.

Hab. In fissuris rupium ad verticem montis Pichincha, Andium Peruvianorum. *D. Prof. Jameson.*

Planta cæspitosa (*Jameson*).

Stipes digitalis, rufo-fuscus, nitidus, squamosus, teres, hinc sulcatus.

Frons spithamæus et ultra, strictus, circumscriptione lanceolata, bipinnata. *Pinnæ* lanceolatæ, obtusæ. *Pinnulæ* arcte insertæ, rigidæ, orbiculari-ovatæ, acutæ, brevissime petiolatæ, margine reflexæ, inæqualiter denticulatæ, supra convexæ, intense virides; subtus concavæ, pallidiores, pilis vel paleis angustis, nitidis, fuscis adspersæ.

Rachis universalis partialisque valde squamoso-paleacea, paleis vel squamis rufo-fuscis, nitidis, sæpe laceratis.

Sori pauci, 2—5 in singula pinna, subglobosi.

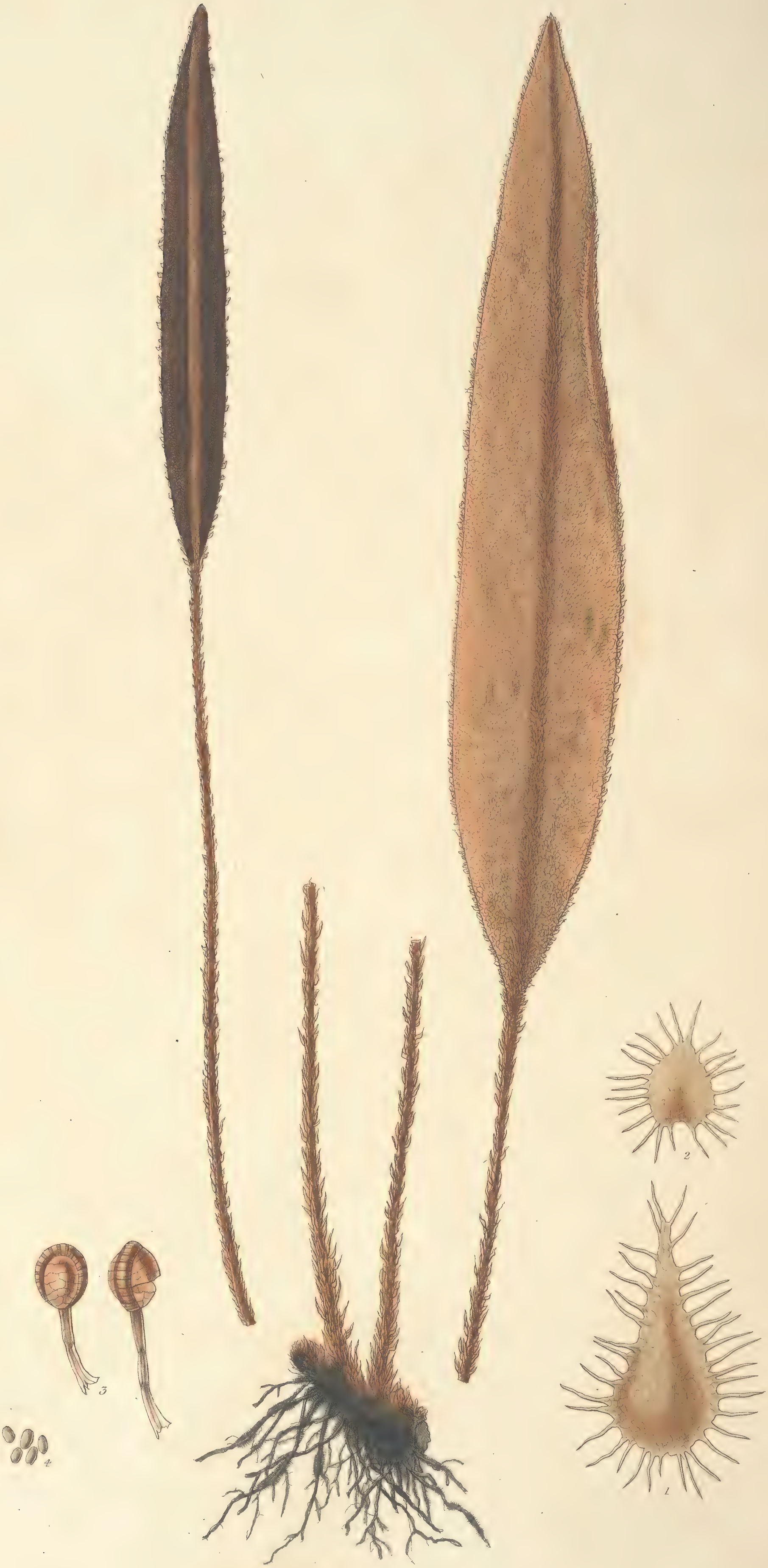
Capsulæ sublonge pedicellatæ, fuscæ, annulatæ.

Semina subglobosa vel ovalia, intense flavo-fusca.

Fig. 1. Pinna cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

The habit of this plant is more that of a *Nephrodium* than of a *Polypodium*; yet, upon the closest examination, and in the most perfect state of the sorus, we can find no trace of an involucre.

The only specimens we have seen are those gathered by Professor William Jameson.



Acrostichum Langsdorffii.

Greville del.t

Swan Si

TAB. CLXIV.

ACROSTICHUM LANGSDORFII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *Langsdorfii;* fronde simplici, sterili lato-, fertili angusto-lanceolata, basi apiceque acuta utrinque margine stipiteque dense squamosis, squamis longe ciliatis.

Hab. In Brasilia, Provincia Minas Geraes. *Langsdorff.*

Caudex repens, crassus, squamosus, inferne radicosus; radicibus fibrosis, ramosis, subtomentosis.

Stipes spithamæus, dense paleaceo-squamosus; squamis ovatis, acuminatis, margine ubique ciliatis.

Frons fere exacte lanceolata, coriacea; *sterilis* spithamæa, lato-lanceolata, basi apiceque acuta, costata, utrinque margineque squamis late ovatis obscure reticulatis, longe ciliatis, ferrugineis densissime tecta: *fertilis* magis angusta, facie superiore, margine costaque inferiore præcipue squamosa.

Capsulæ faciem superiorem omnino tegentes, costa excepta, subglobosæ, sublonge pedicellatæ, annulo fere completo cinctæ.

Semina oblongo-ovalia, intense fusca.

Fig. 1. Squama stipitis. f. 2. Squama frondis. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Allied to the *Acrostichum succisæfolium* from Tristan da Cunha, already figured in this work: but distinguished from it by its larger size, more acute base and apex of the frond, and by the very different structure of the scales both of the frond and stipes.

Asplenium imbricatum.

J. Swan Sc.

TAB. CLXV.

ASPLENIUM IMBRICATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM,* Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *imbricatum;* fronde lineari-lanceolata bi- rarissime tri-pinnata, pinnis imbricatis, pinnulis cuneatis bi-tridentatis, soris plerumque solitariis.

Hab. In fissuris rupium, locis umbrosis, prope verticem montis "Pichincha," Andium Peruvianorum, alt. 15,500 ped. *D. Prof. Gul. Jameson.*

Stipes brevis, vix biuncialis, teres, hinc sulcatus, glaber, nitidus, fusco-purpureus.

Frons spithamæa et ultra, circumscriptione lineari-lanceolata, bipinnata. *Pinnæ* breves, circumscriptione ovatæ vel ovato-deltoideæ, imbricatæ; pinnulis paucis, 3—5, cuneatis, sessilibus, vix tres lineas longis, glabris, apice integris vel obtuse bi-tridentatis, nervis simplicibus vel di-trichotomis instructis; terminali majore; inferioribus non raro iterum divisis binis ternisve; hinc frons tripinnata.

Rachis teres, nudus, atro-fuscus, nitidus.

Sorus oblongus, plerumque solitarius, in singula pinnula unicus.

Involucrum membranaceum, pallide fuscum, subdiaphanum.

Capsulæ globosæ, annulatæ, pedicellatæ.

Semina ovalia, intense fusca.

Fig. 1. Pinna cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This species has the habit of *Cænopteris* (*Darea,* Sm.), and the true fructification of *Asplenium.* We do not find it to accord with any described species, nor does its discoverer appear to have found it elsewhere than at a height of between 15,000 and 16,000 feet, upon the summit of Pichincha.

Trichomanes angustatum?

Swan Sc.

TAB. CLXVI.

TRICHOMANES ANGUSTATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra involucrum monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *angustatum;* frondibus lanceolatis flaccidis pinnatis, pinnis bipinnatifidis, laciniis anguste linearibus glabris integerrimis apice emarginatis, rachi terete nudo, involucris cylindraceo-turbinatis alatis, ore dilatato compresso bilabiato.

Trichomanes angustatum. *Carm. in Linn. Trans. v.* 12. *p.* 513. *Spreng. Syst. Veget. v.* 4. *p.* 130.

Hab. In rupibus Insulæ Tristan da Cunha. *Carmichael.*

Caudex, ut in plerisque congeneribus, gracilis, filiformis, repens.

Stipes subbiuncialis, teres, nudus, viridi-fuscus.

Frons subspithamæa, circumscriptione lanceolata, flaccida, pallide virens, pinnata; pinnis alternis, lanceolatis, profunde bipinnatifidis, laciniis lineari-angustatis, costatis, costa concolore, laxe reticulatis, glaberrimis, integerrimis, nonnunquam furcatis, apicibus emarginatis. *Rachis* omnino nuda, teres, viridis.

Sori in laciniis brevibus pinnarum, terminales.

Involucrum subturbinatum, vel turbinato-cylindraceum, inferne attenuatum, marginibus utrinque lato-alatis, ore dilatato, compresso, bilabiato, labiis subundulatis, integerrimis.

Receptaculum filiforme, involucro duplo longius, basi capsuliferum.

Capsulæ peltatæ, annulo completo cinctæ.

Semina sphærica, fusca.

Fig. 1. Portio pinnæ cum soro. f. 2. Involucrum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This species is remarkable for its very flaccid nature, its pale green colour, and the distinctly winged involucre: or, in other words, the involucre is immersed in the substance of the fronds for its whole length.

Hymenophyllum multifidum.

Dr Greville Delt

Swan Sc.

TAB. CLXVII.

HYMENOPHYLLUM MULTIFIDUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Br.*

Gen. Char. *HYMENOPHYLLUM*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis exterius liberis. *Br.*

Hymenophyllum *multifidum*; fronde deltoideo-ovata acuta pinnata, pinnis bi-tripinnatifidis, laciniis anguste linearibus denticulato-serratis, involucro subsessili obovato compresso apice bilabiato integro, rachi submarginata.

Hymenophyllum multifidum. "*Forst. Prodr. n.* 743." *Swartz, Syn. Fil. p.* 149. & 378. *Willd. Sp. Pl. v.* 5. *p.* 524. *Schkuhr, Fil. t.* 135 *b.?* (absque fruct.) *Spreng. Syst. Veget. v.* 4. *p.* 133.

Trichomanes macilentum. *Herb. Banks.* (fide D. Menzies).

Hab. Insulis maris Pacifici. *Forster.* In Nova Zeelandia. *Menzies.*

Caudex longe repens, filiformis, ramosus, hic illic tomentosus atque radiculosus.

Stipes digitalis, erectus, teres, nudus, nigro-fuscus.

Frons circumscriptione ovato-deltoidea, subrigida, siccitate rufo-fusca, pinnata, pinnis plerisque elongatis, bi-tripinnatifidis, segmentis primariis subflabellatis, laciniis angusto-linearibus, glabris, reticulatis, denticulato-serratis, apicibus obtusis, subintegerrimis. *Rachis* superne marginata, denticulata, inferne teres, nuda, nigro-fusca.

Sori pauci, plerumque solitarii in singula pinna, versus basin laciniæ inferioris, subsessiles.

Involucrum obovatum, inferne cylindraceo-attenuatum, superne compressum in labiis duobus brevibus semiorbicularibus, integerrimis fissum.

Receptaculum inclusum.

Capsulæ peltatæ, annulo lato, integro cinctæ.

Fig. 1. Portio pinnæ cum soro. f. 2. Apex laciniæ. f. 3. Receptaculi pars inferior, cum capsula:—*magn. auct.*

Our specimens were gathered by Mr. Menzies in New Zealand; and they seem in every essential particular to correspond with Forster's *H. multifidum*, as described by Swartz, who observes, that it comes near to *H. fucoides*, but differs in the form of the frond, in the much narrower laciniæ, and in the entire valves of the involucre; and that it is distinguished from *H. bivalve* Forster, by the different situation of the fructification, &c.

Schkuhr has figured the barren fronds of two *Hymenophylla* under the name of *H. bivalve* and *H. multifidum*: but we must observe, that the structure of the former approaches nearer to our plant than the latter.

To judge from the involucre, this species seems to be intermediate between the genera *Hymenophyllum* and *Trichomanes*; and we fear there are many in the same predicament.

Polypodium Wallichii

Dr Greville del.

Swan Sc

POLYPODIUM WALLICHII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Br.*

Gen. Char. ***POLYPODIUM,*** Linn. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium ***Wallichii;*** frondibus longe stipitatis profunde bipartitis coriaceis reticulatis glabris, subtus pallidioribus, lobis palmatis integerrimis binervibus, soris sparsis.

Polypodium Wallichii. *Brown MSS. in Wall. List of Species in Mus. of E. I. C. n.* 287.

Polypodium macrocheiros. *Wall. in Herb.* 1823.

Hab. In montibus "Pundora" dictis, prope Silhet, legit *De Silva.* (*Wallich.*)

Caudex subrepens, crassus, hic illic grosse fibrosus.

Stipes bi-tripedalis, erectus, teres, glaber, nudus, pallide fuscus, pennæ anserinæ crassitie, teres, hinc sulcatus.

Frons magna, circumscriptione lato-oblonga, sesquipedalem longa, duas vel fere tres pedes lata, subcoriacea, viridis, subtus pallidior sed minime glaucescens, ubique glabra, profundissime bipartita, vel, si mavis, binata, lobis latissime cuneato-palmatis, laciniis ensiformibus magis minusve attenuatis, integerrimis, vel nonnunquam obscure dentatis, nervosis.

Nervi ad basin loborum radiatim dichotomi, in singula lacinia semper geminati, infra apices coadunati; *venæ* reticulatæ, areolis oblongis majusculis, non ad marginem attingentibus, venulosis, venularum areolis subquadratis, iterum et bisque etiam (sub lente) minutissime reticulatis.

Sori in venis ternariis sparsi, parvi, pallide fusci, hemisphærici, compacti.

Capsulæ subglobosæ, reticulatæ, annulo lato subintegro cinctæ.

Semina pallide fusca, oblonga, subpellucida.

Fig. 1. Portio frondis. f. 2. Capsulæ. f. 3. Semina:—*valde magn. auct.*

This most remarkable plant has already received a name in honour of our excellent and most liberal friend Dr. Wallich. It was one amongst the innumerable treasures brought by that gentleman himself from the East Indies, and was in the first of those collections that have been so widely distributed by the Honourable the East India Company. To the noble and generous conduct of the Company in that instance we have more than once had occasion to allude. But in saying that the immense Herbaria (with the judicious reservation of a complete set for the Company's Museum) were to be dispersed among the Botanists of Europe, we named only a small part of the services they were about to confer on science. Within the last few weeks Dr. Wallich has received from the Directors, with a view to a similar destination, all the collections of Roxburgh, Buchanan, Patrick Russel, Heyne, Röttler; in short, all those of continental Indian plants.

It is quite to be expected that the Phænogamous Botany of our Indian possessions will thus be materially illustrated; so likewise, in the department that especially concerns our present work, the Ferns, the additions are vastly numerous. Indeed, to such an extent have we been enriched by Dr. Wallich alone, with the plants of this beautiful tribe, that we should be wanting in common justice to the Directors of the East India Company, to Dr. Wallich himself, and to the public, did we not now pledge ourselves to their publication, either in the present form, or in a work not less worthy of them in point of size and execution, and which shall be exclusively devoted to them.

It is among the recent additions to Dr. Wallich's collections now mentioned, that we find beautiful specimens of the present Fern, from which our drawing and descriptions have been made. The specimen selected for the figure, however, though perfect in all its parts, is a small one, as best suited to the size of the plate. We know of only one *Polypodium* that approaches this in general habit, and in the curious and beautiful veining of the frond, and that is the *P. Horsfieldii* of Mr. Brown's MSS. and of Dr. Wallich's List of Specimens in the Honourable East India Company's Museum, n. 286; the *P. palmatum* of Wall. Herb. 1823, gathered by Dr. Wallich in Penang, and distributed in 1829. This latter appears to be the *Dipteris conjugata* of Reinwardt, Sylloge Pl. Nov. in Bot. Zeit. v. 2. 1828 (according to my copy, 1825 according to Dr. Blume); the *P. Di-*

pteris, Blume, Enum. Pl. Javæ et Insularum adjacentium, Fasc. 2. p. 135; and it seems to have been found in Java both by Dr. Horsfield and Dr. Blume. It has no characters by which it may be distinguished from *Polypodium* as a genus; and that of Reinwardt's *Dipteris* was simply "Capsulæ in disco frondis sparsæ solitariæ aut confertæ. Indusium nullum." As a species, it differs from *P. Wallichii* in its strongly-serrated fronds, which are glaucous on the underside, and have the primary *nerves* throwing out branches, after they have attained to the segments, and consequently several parallel nerves are seen within each division of the frond; whereas, in *P. Wallichii*, the forking always commences below the base of each division or segment, and a pair of strong nerves run through its length, uniting again just below the apex. The lesser nervation is the same in both, and highly curious. From the main nerves there branch off at equal distance and at right angles, many strong vessels, here and there united by transverse bars in the middle part of the frond, or between the principal nerves; the lateral ones do not reach the margin, but are connected by a waved longitudinal line, a little within the margin. Thus, these form transversely-oblong and very conspicuous reticulations, within which are somewhat four-sided reticulations, which are also, particularly on the underside, conspicuous to the naked eye: these, again, bear within their areolæ smaller and more irregular meshes, and within these, if a good lens be employed, especially if the frond be held up between the eye and the light, the ultimate reticulations may be seen, excessively minute, and resembling semipellucid points.

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Dr Greville del.

Lycopodium volubile

TAB. CLXX.

LYCOPODIUM VOLUBILE.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles: *aliæ* bivalves, farina repletæ: *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

Lycopodium *volubile;* caule volubili ramoso nudiusculo, ramis foliosis, foliis bifariis lanceolatis falcatis acuminatis distinctis, pedunculis dichotome ramosis, spicis elongatis.

Lycopodium volubile. "*Forst. Prodr. n.* 482." *Swartz, Syn. Fil. p.* 180. & 404. *Willd. Sp. Pl. v.* 5. *p.* 13.

Hab. In Societatis Insulis. *Forster.* Apud "Bay of Islands" in Nova Zeelandia. *D. C. Fraser.*

Caulis valde elongatus, flexuosus, gracilis, filiformis, vix crassitie pennæ passerinæ, subdichotome ramosus, volubilis, foliis subulatis, sparsis, appressis, viridibus hic illic obsitus.

Rami alterni, flexuosi, subdichotome divisi, foliosi.

Folia distincta, bifaria, lanceolata, planiuscula, vel facie superna parum convexa, rigida, pallide viridia, integerrima, subfalcata, basi subdecurrentia, apice acuminata, obscure uninervia.

Stipulæ utrinque minutæ, subulatæ, arcte appressæ, subtus magis remotæ et vix conspicuæ.

Spicæ, in ramis vel pedunculis dichotome divisis, squamosis, duas uncias longæ, elongato-cylindraceæ, flavo-virides, nudæ.

Squamæ fructiferæ subrotundæ, valde acuminatæ, concavæ, serratæ, acumine integerrimo.

Capsulæ transversim ovales, flavæ, bivalves, granulis minutis plerumque globosis pallide flavis repletæ.

Fig 1. Rami pars cum stipulis, a dorso visa. f. 2. Portio spicæ. f. 3. Squama fructifera capsulam fovens. f. 4. Granulæ e capsula:—*magn. auct.*

We are indebted to Mr. Fraser for specimens of this curious *Lycopodium,* gathered at the Bay of Islands, New Zeeland. It has stipules both on the upper and under side of the branches, and these are very small in proportion to the size of the foliage, and do not alternate with the leaves, as is generally the case with the stipulated species of this genus. The whole plant is of a peculiarly tough and rigid nature, and quite unlike any other species of *Lycopodium* with which we are acquainted.

Aspidium aduncum

ASPIDIUM CADUCUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPIDIUM,* Br. *HYPOPELTIS,* Mich. *ASPIDII* Sp., Sw., Willd. *Sori* solitarii, dorsales. *Involucrum* peltatum, orbiculare, stipitatum, in medio sori insertum, undique liberum. *Br.*

Aspidium *caducum;* frondibus pinnatis, pinnis alternis brevi-petiolatis lanceolato-acuminatis subfalcatis serratis basi sursum auriculatis, soris serialibus, stipite paleaceo.

Aspidium caducum. *Wall. in Herb.* 1823: *in List of Specim. in Mus. E. I. C. n.* 381.

Hab. In Nepalia detexit Cl. *Wallich,* anno 1821.

Stipes pedalis, erectus, subteres, fuscus, nitidus, hinc sulcatus, hic illic squamulis membranaceis subovatis, fuscis instructus.

Frons bipedalis et ultra, circumscriptione lanceolata, remote pinnata. *Pinnæ* alternæ, digitales et ultra; *inferiores* paululum minores; *superiores* sensim minores, in apicem pinnatifido-incisam terminantes, lanceolatæ, membranaceæ, acuminatæ, serratæ, costatæ, oblique et obscure venosæ, venis dichotomis, basi oblique cuneatæ, in petiolum brevissimum attenuatæ, sursum auriculatæ, utrinque glaberrimæ.

Sori intra marginem et costam seriatim dispositi, in partem superiorem pinnæ, nostris exemplaribus ætate, est videtur, parvæ, e capsulis paucis constantes.

Involucrum obsoletum vix ullum.

Capsulæ fuscæ, sphæricæ, stipitatæ, annulo fere completo cinctæ.

Fig. 1. Capsulæ:—*magn. auct.*

So small are the sori in this plant, that, in the dried state at least, the involucre is not distinctly perceptible. In the younger form of the fructification there is indeed an appearance of a membrane covering the capsules, but it does not seem to form either an orbicular or reniform involucre.

Asplenium varians

D.r Greville del.t *Swan Sc*

TAB. CLXXII.

ASPLENIUM VARIANS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM,* Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *varians;* cæspitosum (parvum) glabrum, frondibus lanceolatis stipitatis pinnatis bipinnatisque, pinnulis paucis cuneatis bi-trilobatis acute incisis, soris demum confluentibus, stipite rachique glabris.

Aspidium varians. *Wallich, MSS. in Herb. Hook.*

Hab. In rupibus Nepaliæ. Jan. 1818. Nom. vern. "Dawecow." *Wallich.*

Radix dense fibrosa, fibris longis ramosis gracilibus.

Stipites plurimi ex eadem radice, semiunciam ad duas uncias longi, tenues, glabri, basi fuscescentes, hinc canaliculati, ad basin piloso-paleacei.

Frondes duas ad tres uncias longæ, ad digitalem, circumscriptione lanceolatæ, pinnatæ; *pinnæ* primariæ breviter petiolatæ, remotiusculæ, patentes; *pinnulæ* sessiles, late obovatæ, cuneatæ, bi-trilobatæ, lobis obtusis, profunde acuteque inciso-serratis, dichotome venosis, supra intense, subtus pallide virides, ubique glabræ. *Rachis* gracilis, paululum flexuosus, glaber.

Sori plerumque duo in singulo lobo, demum confluentes et totum fere dorsum tegentes.

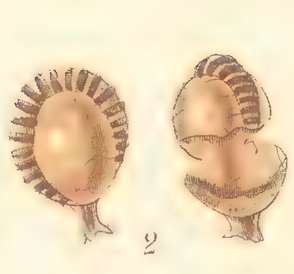
Involucrum lineari-oblongum, pallide fuscum.

Capsulæ numerosæ, fuscæ, pedicellatæ, pedicellis capsula quintuplo longioribus, gracilibus, articulatis.

Semina subrotunda, fusca, margine crenato cincta.

Fig. 1. Pinnæ. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This small but very distinct species of *Asplenium* was amongst the earliest communications that we received from our generous friend Dr. Wallich. It was marked as being gathered upon rocks in Nepal in the year 1818, and as having the provincial appellation of *Dawecow*. We do not find the name in the extensive list of the plants of the Museum of the Honourable the East India Company, nor any specimens exactly corresponding with it among the species that have been distributed.



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Adiantum chilense

W.ᵐ Greville del.ᵗ

Swan Sc.

TAB. CLXXIII.

ADIANTUM CHILENSE.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ADIANTUM,* Linn. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso, capsulifero, limbo membranaceo, libero.

Adiantum *chilense;* fronde tripinnata, pinnis breviter petiolatis subrigidis reniformi-cuneatis radiatim venosis crenatis, involucris transversim oblongis approximatis, stipite rachique nitidis glaberrimis.

α. *glabra;* frondibus ubique glaberrimis.

Adiantum chilense. *Kaulf. Enum. Fil. p.* 207. *Spreng. Syst. Veget. v.* 4. *p.* 214.

β. *hirsuta;* pinnarum venis utrinque laxe pilosis. (Tab. 173.)

Hab. In Peru, Chile. *Chamisso.* β. In fissuris rupium intra "La Guardia et La Punta de Quilliay," et in aliis convallibus Andium Chilensium, alt. 5000 ped. *J. Gillies, M.D.*

Stipes erectus, digitalis et ultra, teres, atro-purpureus, nitidus, crassitie pennæ passerinæ.

Frons spithamæus, circumscriptione late ovata, obtusa, tripinnata, pinnis erecto-patentibus pinnulisque alternis.

Pinnulæ petiolo brevi insidentes, rigidiusculæ, subrotundo-reniformes, nunc basi fere truncatæ plerumque medio cuneato-attenuatæ, crenatæ, pulcherrime radiatim venosæ, venis dichotomis, in α. glabris, in β. pilosis, pilis longis, flexuosis, sparsis, nitidis. *Rachis* universalis partialisque fusco-purpureus, nitidus.

Sori transversim oblongi, approximati, in omnibus pinnulis, demum confluentes.

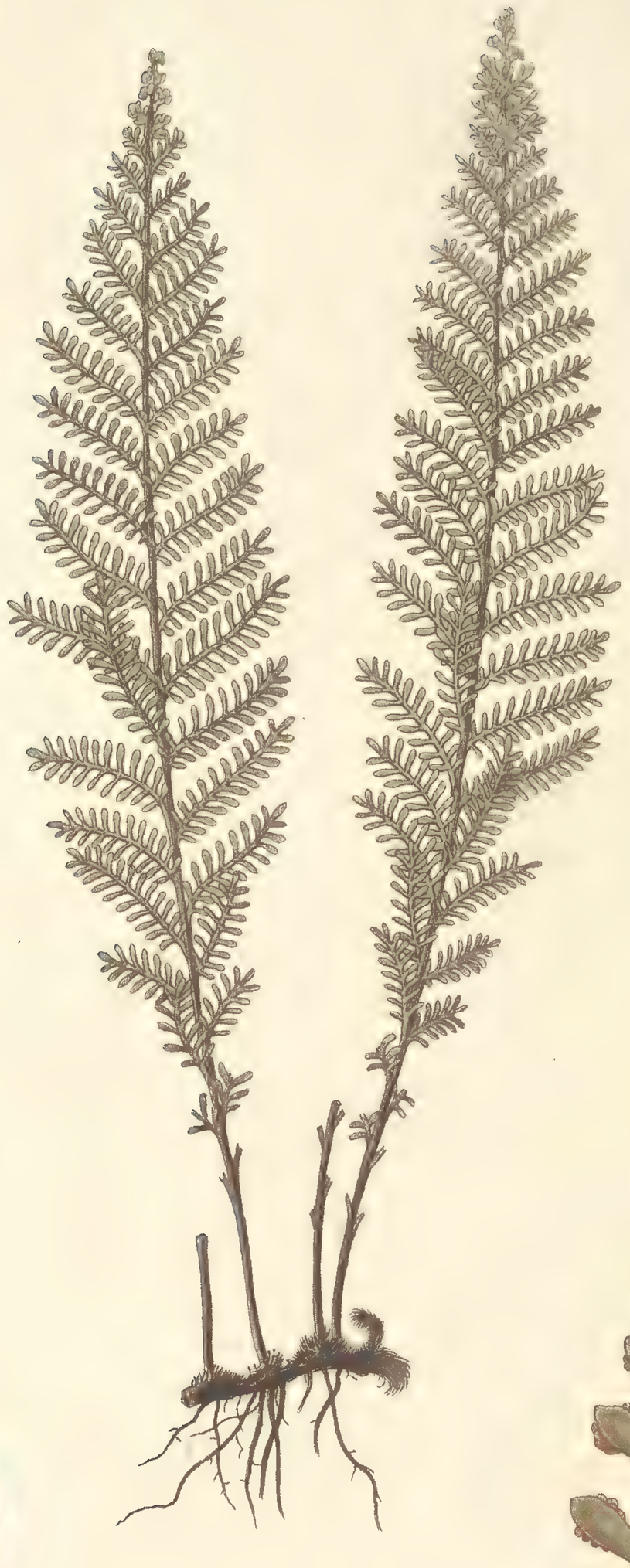
Involucrum colore et substantia frondis, incurvum, parce pilosum.

Capsulæ numerosæ, annulo fere completo cinctæ, brevissime stipitatæ.

Semina ovalia, lævia.

Fig. 1. Pinnula. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Our figure of this very pretty species of a most beautiful genus, represents what we here consider the var. β. of Professor Kaulfuss's *Adiantum chilense,* and was drawn from Dr. Gillies's specimens. At the same time we may observe, that it is probably the more perfect state of the plant, which in age loses all traces of hairiness: for an authentic specimen from Kaulfuss himself precisely corresponds with ours, except in the peculiarity just mentioned, and in being darker-coloured, with less gloss and with more advanced capsules. As a species, it is one of the most distinct we are acquainted with of this difficult genus.



Adenophorus bipinnatus

D.r Greville del.t

Swan Sc.

TAB. CLXXIV.

ADENOPHORUS BIPINNATUS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ADENOPHORUS*, Gaudich. *Sori* subrotundi, solitarii, subterminales, apici venæ in receptaculum dilatato, irregulariter bilobo insidentes. *Capsulæ* glandulis stipitatis intermixtæ. *Indusium* nullum. Frondes *utrinque glandulosæ*. Gaudich.

Adenophorus *bipinnatus*; frondibus lanceolatis bipinnatis (potius bipinnatifidis), laciniis linearibus clavatis decurrentibus, stipite terete obscure marginato.

Adenophorus bipinnatus. *Gaudich. in Freycin. Voy. Bot. v.* 1. *p.* 365. *t.* 8. *f.* 2.

Hab. In insulis tropicis Maris Pacifici. Apud Otaheite, primum detexit amiciss. *Menzies*. Insulis Sandvicensibus, alt. 400 ad 450 hexapod. *Gaudichaud; Macrae*, præcipue in insula "Whoohahoo" dicta; *Lay* et *Collie* in expeditione speculatoria Beecheyana.

Caudex repens, crassiusculus, squamis subulatis paleaceis, fuscis, nitidis, dense obsitus.

Stipes biuncialis ad digitalem, erectus, teres, utrinque læviter marginatus.

Frons circumscriptione lanceolata, basi apiceque attenuata, fuscescens, rigida, digitalis ad palmarem, bipinnata, pinnis patentibus, oblongo-acuminatis, subunciam longis. *Pinnulæ* vel *laciniæ* etiam patentes, 2—3 lineas longæ, lineari-clavatæ, remotiusculæ, crassiusculæ, subtus uninerves, inferne subdecurrentes, integerrimæ, nunc, raro, inferiores bifidæ, utrinque glandulis vel squamis clavatis, arcte appressis, sed, subtus præcipue, tectæ. *Rachides* squamulosæ.

Sori rotundati, subglobosi, prominentes, solitarii sub apicem dilatatum laciniarum, præcipue pinnarum superiorum.

Capsulæ fuscæ, longe pedicellatæ, annulo fere completo cinctæ, glandulis clavatis (capsulis abortivis) immixtæ.

Semina sphærica, pellucida, intus medio massa viridescente repleta.

Fig. 1. Pinna. f. 2. Pinnula vel lacinia sorifera. f. 3. Apex laciniæ, capsulis glandulisque plerisque desumtis. f. 4. Idem, a facie superiore visus. f. 5. Squamulæ frondis. f. 6. Capsula cum glandulis clavatis sori. f. 7. Semina:—*magn. auct.*

The present is perhaps the most frequent of the five species that are now enumerated of this singular genus. It exists in the collections of almost all the travellers who visit the islands of the Pacific, situated within the tropics: it has existed in the rich herbarium of our invaluable friend Mr. Menzies ever since the year 1792, when he gathered it in Otaheite during the voyage of Captain Vancouver; and it has by him been distributed among other botanists: but it appears to be particularly abundant in the Sandwich island group, north of the equator. The habit of this genus is so unlike that of *Polypodium*, to which it would, upon a slight inspection of the sori, be referred, that Gaudichaud has done wisely in constituting it a new genus. Its habit is quite peculiar, though it must be confessed that the generic marks are not very decisive. The irregularly 2-lobed receptacle of the capsules we do not distinguish. To us the sorus seems to spring from one common point at the extremity of the nerve or midrib.

Adenophorus Tamarisci

Dr. Greville del.

Swan Sc.

TAB. CLXXV.

ADENOPHORUS TAMARISCI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ADENOPHORUS,* Gaudich. *Sori* subrotundi, solitarii, subterminales, apici venæ in receptaculum dilatato, irregulariter bilobo insidentes. *Capsulæ* glandulis stipitatis intermixtæ. *Indusium* nullum. Frondes *utrinque glandulosæ.* Gaudich.

Adenophorus *Tamarisci;* frondibus oblongo-ovalibus apice caudatis bipinnatis, laciniis linearispathulatis decurrentibus, stipite terete obscure marginato.

Polypodium tamariscinum. *Kaulf. Enum. Fil. p.* 117.

Hab. In insula Sandvicensi O Wahu. *Chamisso.*

Caudex a nobis non visus.

Stipes unciam ad sesquiunciam longus, erectus, squamulosus, utrinque submarginatus.

Frons (nostris exemplaribus) digitalis, circumscriptione ovali-oblonga, apice caudata, bipinnata, (in caudam simpliciter pinnata,) basi breviter attenuata. *Pinnæ* subunciam longæ, patentes, lineari-oblongæ, obtusæ. *Pinnulæ* vix bilineares, lineari-oblongæ, subspathulatæ, decurrentes, utrinque setis clavatis appressis squamulosæ. *Color,* siccitate, fuscescens.

Sori, Capsulæ, Glandulæ pedicellatæ, et *Semina,* omnino ut in *A. bipinnato.*

Fig. 1. Pinna. f. 2. Lacinia seu pinnula. f. 3. Squamulæ seu setæ claviformes frondis. f. 4. Capsulæ, cum glandulis pedicellatis. f. 5. Semina:—*magn. auct.*

Our figure of this plant was made from specimens communicated by Prof. Kaulfuss: but, except in the contracted and cordate extremity of the frond, there is scarcely a difference between it and *A. bipinnatus,* and it is possible that it may be an accidental variety; if it be so, the specific name of Kaulfuss has still the claim of priority.

Adenophorus minutus

TAB. CLXXVI.

ADENOPHORUS HYMENOPHYLLOIDES.

(A. MINUTUS in Tabulam.)

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ADENOPHORUS*, Gaudich. *Sori* subrotundi, solitarii, subterminales, apici venæ in receptaculum dilatato, irregulariter bilobo insidentes. *Capsulæ* glandulis stipitatis intermixtæ. *Indusium* nullum. Frondes *utrinque glandulosæ.* Gaudich.

Adenophorus *hymenophylloides;* frondibus oblongis seu lineari-oblongis bipinnatis, laciniis obovatis decurrentibus, stipite gracillimo filiformi immarginato.

Adenophorus minutus. *Gaudich. in Freycin. Voy. Bot. v.* 1. *p.* 365. *t.* 8. *f.* 3. (*et Tab. nostr.* 176.)

Polypodium hymenophylloides. *Kaulf. Enum. Fil. p.* 118.

Hab. In O Wahu. *Chamisso.*

Radix fasciculato-fibrosa (*Gaudich.*).

Caudex cæspitosus, paleis minutis lanceolato-subulatis ferrugineis tectus, fide *Kaulfussii.*

Stipes erectus, gracillimus, filiformis, nigricans, immarginatus vix unciam longus, hic illic setoso-squamulosus.

Frons digitalis, oblongo-lanceolata vel lineari-oblonga, bipinnata; *pinnis* brevibus approximatis oblongis obtusis. *Pinnulæ* seu laciniæ semper obovatæ, integerrimæ, coriaceo-membranaceæ, utrinque setis vel squamulis oblongis clavatisque adspersis tectæ. *Rachis* etiam squamosa, plano-dilatata.

Fructificatio ut in duabus speciebus jamdudum descriptis.

Fig. 1. Pinna. f. 2. Pinnula seu lacinia. f. 3. Capsulæ cum glandulis clavatis pedicellatis. f. 4. Squamulæ frondis. f. 5. Semina:—*magn. auct.*

This species appears very distinct from the two figured and described at Tab. 174 & 175; and still more so from the *A. tripinnatifidus* of Gaudichaud, of which we have specimens gathered by Mr. Macrae, through the liberality of the Horticultural Society, and which is the tallest and largest of the genus; well figured in the botanical part of Freycinet's Voyage, t. 8. f. 1.

As in the genus *Hymenophyllum* and *Trichomanes*, it is often difficult in the present one to say whether the fronds should be called bipinnate or bipinnatifid, the rachis being flat and dilated, and of the same substance as the pinnæ or laciniæ themselves; while these latter are so distinct and remote as to appear like true leaflets. In all the species, the colour, in the dried state at least, borders upon brown.

Lycopodium ovatifolium

del.

Swan Sc

TAB. CLXXVII.

LYCOPODIUM OVALIFOLIUM.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6-globosis. *Br.*

Lycopodium *ovalifolium*; repens dichotome ramosum, foliis distichis ovalibus uninerviis nitidis integerrimis, stipulis conformibus paululum falcatis apiculatis, spicis terminalibus cylindraceis, squamis cordato-acuminatis inferne ciliatis.

Hab. In oris occidentalibus Americæ Septentrionalis. *Dom. Douglas.*

Caules palmares et ultra, inferne decumbentes, repentes, superne ramis repetitim dichotomis adscendentes.

Folia approximata, pallide flavo-viridia, nitida, rigidiuscula, disticha, alterna, fere exacte ovalia, patentia, paululum concava, margine omnino integerrima, uninervia, nervo ante apicem evanescente. *Stipulæ* foliis conformes sed paululum minores, subfalcatæ, uninerves, integerrimæ, apice mucronatæ.

Spicæ terminales numerosæ, cylindraceæ, flavo-fuscæ.

Squamæ quadrifariam insertæ, cordato-acuminatæ, integerrimæ, carinatæ, subpatentes, inferne ad marginem utrinque ciliatæ.

Capsula reniformis, flava, bivalvis, seminibus vel granulis minutis exacte sphæricis repleta.

Fig. 1. Ramulus ultimus, cum spica. f. 2. Folia et stipulæ. f. 3. 4. Squamæ capsuliferæ. f. 5. Semina:—*magn. auct.*

The stipulated distichous-leaved species of *Lycopodium* are so numerous and so difficult to be determined, without submitting them to the most careful examination and comparison, that it behoves us to introduce a new species with great caution. As far, however, as our opportunities will permit us to judge, the present may certainly be reckoned among those hitherto undescribed. Its nearest affinity is, perhaps, the West Indian *L. denudatum* of Willdenow; but neither the leaves nor the stipules can be called "acute," nor the spikes "short."

Jamesonia pulchra

Dr. Greville del.t

Swan Sc.

TAB. CLXXVIII.

JAMESONIA PULCHRA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *JAMESONIA* Nobis. *Sori* solitarii in medio pinnarum ad basin venarum inserti, pilis numerosissimis compressis immersi. *Involucrum* continuum, membranaceum, e margine retroflexo pinnæ, demum a capsulis remotum. *Capsulæ* subsessiles. *Semina* triangularia. Filix *perpulchra, simpliciter pinnata,* pinnis *coriaceis subflabelliformibus.*

Jamesonia *pulchra.*

Hab. In Monte Cayambe Peruvianorum: ad alt. 12,000 ped. legit et communicavit Clariss. *Gul. Jameson, Professor.*

Stipes digitalis et ultra, erectus, flexuosus, primum, ut videtur, pilosus, demum glaberrimus, nitidus, atro-purpureus.

Frons linearis, simplex, erecta, spithamæa, parte superiore et juniore pilis fulvis densissime lanata, simpliciter pinnata.

Pinnæ 2—3-lineares, patentes, nonnunquam reflexæ, breviter petiolatæ, petiolo glaberrimo fusco, reniformi-flabelliformes, rigidæ, facie superiore convexæ, glaberrimæ, subradiatim et dichotome nervosæ, nervis impressis, marginibus reflexis et ob nervos impressos crenatis, inferne pilis numerosis, fulvis, longis, compressis, articulatis tectæ. *Rachis* pilis fulvis intertextis dense obsita.

Involucrum continuum e marginis inflexi portione pinnæ, ut videtur, formatum, et nostris exemplaribus a capsulis remotum.

Sori solitarii in singula pinna, ejusque basi inserta, versus apicem petioli, subglobosi, pilis immersi.

Capsula obovato-globosa, fere omnino sessilis, annulata, annulo fere completo cincta.

Semina subtriangularia, angulis obtusis, pellucida, pallide flavo-fuscescentia.

Fig. 1. Portio rachidis cum pinnis duabus. f. 2. Pinna sorifera, a dorso visa. f. 3. Involucri portio. f. 4. Pili. f. 5. Capsulæ. f. 6. Semina:—*magn. auct.*

The present highly curious Fern was communicated to us by Professor William Jameson of Quito; and, being unable to refer it satisfactorily to any hitherto described genus, we have ventured to constitute a new one of it, which we dedicate to its discoverer, who is pursuing his scientific researches in South America with unabated zeal. The only specimens, however, which we have yet had the good fortune to receive are the two that are here represented, and the details are all that we can at this time offer. Individuals in a more or in a less advanced state might enable us to reform our generic character, which is by no means so satisfactory as we could wish. The situation of the sorus, as we have hitherto seen it, is indeed very remarkable, and at such a distance from the involucre that it scarcely seems to be connected with it; and yet, that the inflexed and dilated portion of the margin of the pinna is to be looked upon as a real involucre, analogy will scarcely permit us to doubt. This involucre resembles that of a *Pteris* so much, that were the capsules inserted beneath it, we might have considered our plant to belong to that genus; although the curious fulvous hairs, which abound on this plant, and the whole habit, proclaim it to be entirely *sui generis*.

Trichomanes muscoides

Pancreville del.t

Sr. ex. Sc.

TAB. CLXXIX.

TRICHOMANES MUSCOIDES.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *muscoides;* frondibus erectis simplicibus glaberrimis oblongis vel oblongo-lanceolatis obtusis basi cuneatis subsessilibus sinuato-subpinnatifidis minutissime reticulatis remote venosis, involucris immersis, ore perbrevi vix labiato libero.

Trichomanes muscoides. *Sw. Fl. Ind. Occ. v.* 3. *p.* 1726. *Syn. Fil. p.* 141. *Willd. Sp. Pl. v.* 5. *p.* 500. *Spreng. Syst. Veget. v.* 4. *p.* 128.

Trichomanes hymenodes. "*Hedw. Fil. Ic.*"

Trichomanes simplex repens, foliis incisis, capsulis diphyllis. *Brown, Jam. p.* 86.

Hab. In insulis occidentalibus, præcipue Jamaicæ et Hispaniolæ. *Swartz; Dom^i Wiles, & Higson.*

Caudex longe intra muscos repens, gracilis, filiformis, ferrugineo-tomentosus.

Frondes plurimæ, sparsæ, erectæ, ubique glabræ, unciam ad tres uncias longæ, tenui-membranaceæ, forma mire variabiles, subrotundæ, obovatæ, oblongæ, vel etiam oblongo-lanceolatæ, semper obtusæ, margine superne, præcipue, sinuato-subpinnatifidæ, virides, sub lente minutissime pulcherrime reticulatæ, tenuiter costatæ, nervisque obliquis remotis, dichotomis instructæ, nervoque marginali vel paulo intra marginem currente, inferne cuneatim attenuatæ in stipitem perbrevem, fere nullum.

Sori præcipue versus extremitatem frondis, ad apices loborum.

Involucra venas terminantia, substantia frondis immersa, sub-cylindracea, inferne in nervo attenuata: ore solummodo libero hiante, labiis perbrevibus.

Receptaculum paululum exsertum, inferne intra involucrum, capsuliferum.

Capsulæ orbiculatæ, compressæ, peltatæ, annulo completo cinctæ.

Semina minutissima subrotunda, flavescentia, pellucida.

Fig. 1. Apex frondis. f. 2. Portio ejusdem, *magis aucta.* f. 3. Receptaculum cum capsulis. f. 4. Semina:—*magn. auct.*

Although this is a plant that has been long noticed by botanists, it is one of which we know of no satisfactory figure or description; and which has, we fear, often been confounded with *T. reptans* (Tab. XXXII.), or with some other of the smaller simple-fronded species. Its nearest affinity is with the species just mentioned; yet, if its longer and narrower outline, its more sparingly nerved fronds, with their perfect freedom from hairs, and, above all, the immersed involucre, be attentively considered, there will be no difficulty in distinguishing it. Swartz, indeed, in his *Synopsis Filicum* describes the involucres as exserted: this is only the case apparently, when they are situated in a very narrow segment or lobe of the frond; so that the substance of the frond around it is overlooked or taken for a winged margin, which it seems to constitute.

Asplenium magellanicum

Dr. Greville del.

Swan Sc.

TAB. CLXXX.

ASPLENIUM MAGELLANICUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *magellanicum*; frondibus cæspitosis bi-tripinnatis, pinnulis subcuneatis 3—4-partitis, laciniis obovatis obtusis apice denticulatis, glabris, rachi stipiteque glaberrimis.

Asplenium magellanicum. *Kaulf. Enum. Fil. p.* 175. *Spreng. Syst. Veget. v.* 4. *p.* 88.

Hab. In terra Magellanica. *Commerson* (ex *Kaulf.*). In Chile, *Dom*^{i} *Chamisso, Gillies*, ubi etiam, apud "Conception," legit *Macrae.*

Radix cæspitosa, fibrosa, fibris ramosis, subtomentosis.

Stipites plurimi ex eadem radice, digitales, erecti, tereti-compressi, hinc canaliculati, glabri, virides, inferne nigrescentes ubi etiam paleaceo-squamosi.

Frondes glaberrimæ, stipitis longitudine, deltoideo-ovatæ, subattenuatæ, bi- et (parte inferiore) non raro tripinnata.

Pinnæ primariæ ovatæ, petiolatæ. *Pinnulæ* subsemiunciam longæ, petiolatæ, cuneatæ, bi- tri- nunc quadrilobatæ fere pinnatifidæ, lobis vel segmentis plerumque obovatis, apice obtusis, nonnunquam emarginatis, denticulatis.

Sori solitarii in singulo lobo pinnularum, oblongi.

Involucrum latiusculum, membranaceum.

Capsulæ numerosæ, subglobosæ, longe pedicellatæ, pedicellis capsula duplo triplove longioribus.

Semina oblongo-ovalia, fusca, limbo pellucido cincta.

Fig. 1. Pinnula fructifera. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This is, indeed, as its original describer observes, allied to *Asplenium Ruta muraria*; but the frond is longer, more attenuated, more frequently divided, with ultimate segments smaller and less decidedly cuneate.

The specimens here figured were communicated by the Horticultural Society from that valuable part of their Herbarium formed by their collector Mr. Macrae.

CLXXXI.

Lycopodium acrostachyum.

Dr. Greville. del.

J. Swan. Sc.

TAB. CLXXXI.

LYCOPODIUM ACROSTACHYUM.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

Lycopodium *acrostachyum;* caule pendente dichotomo, foliis undique imbricatis erectis subulatis strictissimis integerrimis, spicis longissimis terminalibus, squamis quadrifariis cordato-acuminatis carinatis.

Lycopodium acrostachyum. *Wallich in List of Pl. in E. Ind. Comp. Mus. n.* 117.

Hab. Apud Singapore legit cel. *Wallich.*

Radix fibrosa, fibris ferrugineo-tomentosis.

Caules e truncis arborum, ut videtur, pendentes, spithamæi, bis terve dichotomi, ubique foliosi.

Folia erecta, rigida, stricta, undique imbricata, subulata, glabra, dorso semitereti, intus plana vel subcanaliculata, marginibus omnino integerrimis.

Spicæ terminales, solitariæ, longissimæ, flexuosæ, tetraquetræ.

Squamæ arcte imbricatæ, quadrifariam dispositæ, cordatæ, acuminatæ, obtusiusculæ, dorso carinatæ.

Capsulæ in axillis squamarum solitariæ, reniformes, bivalves.

Semina triangulari-ovalia, e granulis tribus composita, pellucida, pallide flava.

Fig. 1. Portio caulis cum foliis. f. 2. Squama capsulifera, intus visa. f. 3. Squama capsulifera, a dorso visa:—*magn. auct.*

The East Indies promise to outvie the far-famed Western Indies in the number and beauty of their Ferns. Dr. Wallich's collection alone includes more than four hundred distinct species; and of these the greater number were collected by the personal exertions of Dr. Wallich himself. In *Lycopodia,* Dr. Wallich's Herbarium is peculiarly rich; and the present is only one among many new ones of that genus, which the generous conduct of the Honourable the Directors of the East India Company and of Dr. Wallich gives us the opportunity of figuring.

Polypodium pubescens

D.r Greville del.t

Swan.Sc

TAB. CLXXXII.

POLYPODIUM PUBESCENS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. ***PTERIS***, Linn. *Sori* subrotundi (seriati, sparsi v. conferti). *Involucrum* nullum. *Br.*

Polypodium *pubescens;* fronde ovato-deltoidea subpectinatim pinnata, pinnis oppositis linearioblongis obtusis summis confluentibus, inferioribus valde inæqualiter pinnatifidis, omnibus minute glanduloso-pubescentibus.

Polypodium pubescens. *Gillies MSS.*

Hab. In rupibus apud "Cerro del Morro, San Luis," provincia Bonariæ. *J. Gillies, M.D.*

Caudex longe repens, crassitie pennæ anserinæ, flexuosus, hic illic radicosus, ubique dense squamis vel paleis ovato-acuminatis reticulatis fuscis tectus.

Stipes subdigitalis, erectus, fuscus, semiteres, hinc sulcatus.

Frons subspithamæa, nunc pedalis, circumscriptione deltoideo-ovata, acuminata, pinnata; pinnis approximatis, horizontalibus, oppositis, sessilibus, superne confluentibus, lineari-oblongis, obtusis, costatis, minute pubescenti-glandulosis, inferioribus ad basin et medium versus præcipue pinnatifidis, laciniis valde inæqualibus.

Sori numerosi, sparsi, utrinque intra costam et marginem.

Capsulæ pedicellatæ, fuscæ.

Semina fusca, subreniformi-oblonga.

Fig. 1. Capsulæ. f. 2. Semina. f. 3. Pili glandulosi. f. 4. Squama caudicis:—*magn. auct.*

Among several curious Ferns brought home by Dr. Gillies from his interesting and extensive travels in South America is the present very distinct species of *Polypodium.* The outline or circumscription of the frond, the closely placed and opposite pinnæ, and the glandular pubescence, are its characteristics.

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Davallia flagellifera

TAB. CLXXXIII.

DAVALLIA FLAGELLIFERA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *DAVALLIA*, Sm. *Sori* subrotundi (vel in lineola verticali) margini plerumque approximati. *Involucrum* superficiarium, ex apice venæ unicæ ortum, lateribus vel lata basi adnatum, exterius et verticaliter liberum. *Br.*

Davallia *flagellifera*; fronde lanceolata pinnata, pinnis alternis lineari-lanceolatis longe attenuatis crenato-dentatis basi oblique cuneatis brevi-petiolatis, dentibus soriferis.

Davallia flagellifera. *Wallich in Herb.* 1823; *in List of Pl. of E. Ind. Comp. Mus. n.* 243.

Hab. In Insula Penang. *Wallich.*

Caudex repens, crassus, radiculoso-fibrosus.

Stipes spithamæus et ultra, erectus, teres, fuscus.

Frons pedalis et ultra, circumscriptione ovato-lanceolata, pinnata; pinnis alternis, erecto-patentibus, flexuosis, 4 ad 6 uncias longis, lineari-lanceolatis, rigidis, glabris, basi oblique cuneatis, brevi-pedicellatis, apice longe attenuatis, per totum marginem crenato-dentatis, costatis, oblique sed obscure nervosis. *Rachis* glabra, fusca, hinc sulcata.

Sori solitarii in singulo dente, venas terminantes.

Involucrum hemisphæricum, fornicatum, suberosum, extus dehiscens.

Capsulæ globosæ, fuscæ, longe pedicellatæ.

Semina minutissima, reniformia vel ovalia.

Fig. 1. Portio frondis fructiferæ. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

A beautiful species of a very beautiful genus, and only known to us through the medium of the splendid botanical collections brought to this country by Dr. Wallich.

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Aspidium alatum

TAB. CLXXXIV.

ASPIDIUM ALATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPIDIUM,* Br. *HYPOPELTIS,* Mich. *ASPIDII* Sp., Sw., Willd. *Sori* rotundi, dorsales. *Involucrum* peltatum, orbiculare, stipitatum, in medio sori insertum, undique liberum. *Br.*

Aspidium *alatum;* fronde pinnatifida, laciniis lato-lanceolatis integerrimis acutis reticulatim venosis, infima bifida terminali elongata, stipite lato-alato, soris in venulis anastomosantibus vel terminalibus.

Aspidium alatum. *Wallich in List of Pl. in E. Ind. Comp. Mus. n.* 378.

Hab. In montibus apud Silhet, Indiæ Orientalis. *De Silva.* (*Wall.*)

Caudex ut videtur repens, crassitie pennæ anserinæ, squamosus, subtus fibroso-radiculosus.

Stipes elongatus, spithamæus ad pedalem, usque ad basin alatus; ala superne sensim latior et in frondem dilatata.

Frons ovata, pedalis ad bipedalem, pinnatifida, pinnis paucis, lato-lanceolatis, acutis, submembranaceis, reticulatim venosis, venis primariis secundariisque transversalibus sæpissime anastomosantibus, terminali majore, plantæ junioris lateralibus approximatis, omnibus integris, adultæ remotis, inferioribus bifidis vel bipartitis.

Sori numerosi, transversim seriatim dispositi in duas lineas in areolis venarum secundariarum, vel in ramulis ultimis.

Involucrum orbiculare, convexum, peltatum, centro umbilicatum.

Capsulæ longe pedicellatæ.

Semina subovalia, marginata, margine subcrenato.

Fig. 1. Portio frondis fructiferæ. f. 2. Involucrum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This is a very fine new species of *Aspidium,* with the habit and nervation, too, of some East Indian *Polypodia,* especially those of the *quercifolium* tribe.

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Lycopodium Hookeri.

D.r Greville del.t

Swan Sc

TAB. CLXXXV.

LYCOPODIUM HOOKERI.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6 globosis. *Br.*

Lycopodium *Hookeri;* spicis dichotomis sessilibus squamis subulatis basi cordatis, foliis undique patentibus lineari-subulatis squarrosis integerrimis, ramis pendentibus repetitim dichotomis.

Lycopodium Hookeri. *Wallich's List of Pl. in E. Ind. Comp. Mus. n.* 116.

Lycopodium pulcherrimum. *Wall. in Herb.* 1823.

Hab. In Napaulia. *Wallich.*

Caules, ut videtur, ex arborum truncis pendentes, bipedales et ultra, flexuosi, repetitim dichotome ramosi, crassitie pennæ anserinæ, versus apices sensim attenuati.

Folia undique sparsa, patentia, squarrosa, 6 lineas longa, lineari-subulata, plana, obscure costata, integerrima, flavo-viridia.

Spica longissima, terminalis, dichotoma. *Squamæ* erectæ, imbricatæ, subulatæ, strictæ, basi cordatæ, paululum concavæ, capsuliferæ.

Capsulæ bivalves, reniformes, flavæ.

Semina, seu *farina,* triangularia, pellucida, flavescentia.

Fig. 1. Folium. f. 2. Squama fructifera, a dorso visa. f. 3. Squama suprema, intus visa, cum capsula:—*magn. auct.*

This may assuredly be considered to rank among the largest and stoutest of the *Lycopodia,* and at the same time as one of the most distinct with which we are acquainted.

Vittaria acrostichoides.

Wm Greville del.

J. Swan Sc.

TAB. CLXXXVI.

VITTARIA ACROSTICHOIDES.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *VITTARIA*, Smith. *Sori* solitarii, continui, lineares, submarginales, immersi. *Indusium* geminatum, superficiale.

Vittaria *acrostichoides;* frondibus stipitatis coriaceis lanceolatis obtusis (fertilibus linearibus), soris submarginalibus.

Hab. Ad Promontorium Bonæ Spei. *D. Thom.*

Caudex repens, crassus, dense squamosus, squamis ovatis, acuminatis, scariosis, nitidis, fuscis; subtus radiculosus.

Stipites 2 ad 4 uncias longi, erecti vel subflexuosi, pallide fusci, nitidi.

Frondes digitales, in fertilibus fere ad palmarem, lanceolatæ, obtusæ, coriaceæ, costatæ, enerves, glabræ; steriles lineares vel lineari-lanceolatæ.

Sori marginales, continui, demum confluentes et totam paginam inferiorem frondis tegentes, ut in *Acrosticho.*

Capsulæ globosæ, fuscæ, longe pedicellatæ.

Semina ovali-subglobosa, flavo-viridia.

Fig. 1. Capsulæ. f. 2. Semina. f. 3. Squama e caudice:—*magn. auct.*

Our specimens of this South African Fern are not in that state of perfection as to render it quite evident that there is an involucre present with the sori: and it is doubtful whether this plant would not with more propriety be arranged with the genus *Tænitis*. At first the sori of fructifications are decidedly in lines, close to the margin; but in age the capsules spread, so as to cover the whole back of the frond; and in that state the plant might well be taken for an *Acrostichum*.

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Vittaria plantaginea

Swan

TAB. CLXXXVII.

VITTARIA PLANTAGINEA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *VITTARIA*, Smith. *Sori* solitarii, continui, lineares, submarginales, immersi. *Indusium* geminatum, superficiale.

Vittaria *plantaginea*; frondibus erectis lineari-lanceolatis, soris solitariis marginalibus in parte media frondis. *Willd.*

Vittaria plantaginea. *Bory, Fl. v.* 2. *p.* 325. *Willd. Sp. Pl. v.* 5. *p.* 406. *Spreng. Syst. Veget. v.* 4. *p.* 67.

Hab. In insula Borbonia. *Bory.*

Caudex repens, crassitie pennæ anserinæ, setis vel paleis subulatis, scariosis, nitidis, fuscis, dense obtectus, hic illic radicosus, fibris ferrugineo-tomentosis.

Frons spithamæa fere pedalis, erecta, coriaceo-membranacea, lineari-lanceolata, paululum falcata, integerrima, glabra, basi longe attenuata, superne acuminata, obscure costata, enervosa, 4—5 lineas lata.

Sori solitarii, marginales, continui in partem superiorem frondis, sed non ad apicem attingentes, 4—5 uncias longi.

Involucrum duplex, exterius crassiusculum.

Capsulæ brevi-pedicellatæ, sphæricæ, annulo fere completo cinctæ. Inter has capsulas sunt pili plurimi articulati, articulo ultimo claviformi truncato.

Semina oblongo-reniformia, pellucida, fere albida.

Fig. 1. Portio frondis. f. 2. Involucri portio. f. 3. Capsulæ, cum filamentis clavatis. f. 4. Semina:—*magn. auct.*

This *Vittaria* we are induced to give as the true *plantaginea* of Bory de St. Vincent, having been favoured with original specimens of that author by Professor Mertens of Bremen, and which are here figured. But it must be confessed, that the distinguishing marks of this and other *Vittariæ* are but imperfectly defined: and even with regard to the present, it seems scarcely if at all different, on the one hand, from what we have received from botanists of high authority as *V. elongata*; and on the other, from *V. ensifolia* of Swartz.

Adiantum obtusum

D.r Greville del.t

TAB. CLXXXVIII.

ADIANTUM OBTUSUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ADIANTUM,* Linn. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo libero. *Br.*

Adiantum *obtusum;* frondibus bipinnatis, pinnis elongatis strictis, pinnulis rigidis oblongis subrhomboideis obtusis petiolatis, soris transversim oblongis, rachibus omnibus hirsuto-scabris, stipite lævi.

Adiantum obtusum. *Desv. in Berl. Mag. p.* 327. *Spreng. Syst. Veget. v.* 4. *p.* 113.

Hab. In insula Sanctæ Trinitatis. *R. Woodford, Eq. Aur.*

Stipes elongatus, pedalis, atro-purpureus, nitidus, dorso semicylindricus, hinc planus.

Frons circumscriptione ovata, bipinnata; *pinnis* digitalibus vel etiam palmaribus, lineari-oblongis, paululum attenuatis, alternis, erecto-patentibus, strictis; *pinnulis* subhorizontaliter patentibus, 3 lineas longis, rigidis, striato-venosis, glabris, oblongis, breviter petiolatis, nunc subrhomboideis, latere inferiori dimidiato, superiori basi truncato, integerrima, fusco-viridia. *Rachis universalis partialis*que pube fusca scabræ.

Sori marginales, ad apicem et in marginem superiorem siti.

Involucra transversalia, oblonga, integerrima, fusca.

Capsulæ longe pedicellatæ.

Semina subglobosa, magis minusve angulata, nunc reniformia.

Fig. 1. Pinna sorifera, cum portione rachidis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

It does not appear that any author has been acquainted with this species of *Adiantum,* except M. Desvaux, who, in a volume of the *Berlin Magazine of Natural History* for 1811, has published it under the name of *Adiantum obtusum,* but without being aware of its native country. It was thus with much satisfaction that we received from the lamented Sir Ralph Woodford, governor of the Island of Trinidad, specimens gathered by Mr. Lockhart in that fertile country. From one of these the figure here given was made. It is very distinct from any other described species of the genus, and has rather the habit of some *Lindseæ* than of *Adianta* in general.

Asplenium cuneatum.

Dr Greville del.

J. Swan.

TAB. CLXXXIX.

ASPLENIUM CUNEATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *cuneatum*; frondibus oblongo-lanceolatis bipinnatis, pinnulis obovato-cuneatis obtusis rigidis striatis basi decurrentibus apice inæqualiter dentatis, superioribus confluentibus.

Asplenium cuneatum. *Lam. Encycl. v.* 2. *p.* 306. *Swartz, Syn. Fil. p.* 84. *Willd. Sp. Pl. v.* 5. *p.* 344. *Spreng. Syst. Veget. v.* 4. *p.* 89.

Ruta muraria maxima, foliis oblongis crenatis. *Sloane, Jam. Hist. v.* 1. *p.* 93. *t.* 46. *f.* 2.

Hab. In Indiis Occidentalibus; et in insula Mauritii, unde misit *Prof. Bojer.*

Radix dense cæspitosa, fibrosa.

Stipites cæspitosi, digitales ad palmarem, erecti, semiteretes, atro-fusci, glabri, ad basin paleaceo-squamosi, paleis nigrescentibus.

Frondes spithamææ ad pedalem et ultra, circumscriptione ovato- seu oblongo-lanceolatæ, bipinnatæ; *pinnis* remotiusculis horizontalibus, oblongis, magis minusve attenuatis, rigidis, supra nitidis, subtus opacis atque pallidis; *pinnulis* obovato-cuneatis, obtusis, striatis, glabris, basi decurrentibus in rachidem alatam, apice inæqualiter dentatis, non raro sursum auriculatis, superioribus confluentibus. *Rachis* universalis subpilosa, inferne nigrescens.

Sori lineares, elongati, 4—6 in singula pinnula.

Capsulæ longe pedicellatæ, lato-annulatæ.

Semina ovalia, subangulata, flavo-fusca.

Fig. 1. Pinnula fructifera cum rachidis portione. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

The specimen here figured, sent to us from the Mauritius by Professor Bojer, perhaps gives as fair an idea of the more usual state of *Asplenium cuneatum* as any we could have selected. But at the same time we must observe that it is subject to much variation in the size and the form of the pinnæ and pinnulæ. That which we have from Sieber as *A. cuneatum*, (the No. 71 of his *Synopsis Filicum*, from the Mauritius also,) we are almost tempted to consider a distinct species; its lower pinnules are deeply bipartite, like the pinnæ of *A. bipartitum* of Willdenow. With this latter author we agree in considering the West Indian and Mauritius specimens to be identical. We possess it from the island of St. Vincent, gathered by the Rev. L. Guilding, and from Guiana by Mr. Parker.

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Adiantum obliquum.

P.J. Greville delt.

J. Swan Sc

TAB. CXC.

ADIANTUM OBLIQUUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ADIANTUM*, Linn. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo libero. *Br.*

Adiantum *obliquum;* frondibus pinnatis, pinnis ovato-lanceolatis subacuminatis serrulatis subtus glaucis basi superiore sublobato-truncatis, inferiore dimidiato-cuneatis margine utrinque soriferis, soris linearibus contiguis, rachi scabra.

Adiantum obliquum. *Willd. Sp. Pl. v.* 5. *p.* 429. *Spreng. Syst. Veget. v.* 4. *p.* 110.

Hab. In India Occidentali. In Insula Porto Rico, et ad Caraccas. *Willd.* Jamaica. *Wright, M.D.* Insula Sancti Vincentii. *Rev. L. Guilding.*

Radix e fibris plurimis, subcæspitosis, ramosis.

Stipites erecti, digitales ad palmarem, atro-purpurei, nitidissimi, inferne solummodo paleacei.

Frons palmaris, ovata, simpliciter pinnata; *pinnis* sesquiuncialibus patentibus breve petiolatis glaucis præcipue subtus, ovato-lanceolatis, sterilibus latioribus obtuse acuminatis serrulatis, dichotome nervosis, *basi superiori* truncatis sublobatis, *inferiori* oblique et quasi dimidiato-cuneatis. *Rachis* pubescenti-scabra.

Sori marginales per totam circumscriptionem pinnæ, lineares, contigui.

Involucra linearia, fusca, integerrima.

Capsulæ longe pedicellatæ.

Semina triangularia, quasi e granulis tribus formata.

Fig. 1. Portio pinnæ soriferæ. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Adiantum obliquum will rank next to *A. macrophyllum*, figured at Tab. 132 of this work, differing, however, in its much smaller-sized, more obtuse and glaucous pinnæ, and in the shape of the sori. Willdenow united it with the *A. lucidum* of Swartz, though he seemed doubtful of the propriety of so doing; and Sprengel has, apparently with justice, separated them.

It is probably not uncommon in the West Indies, whence we have received many specimens from the island of St. Vincent.

Woodsia incisa

Dr Greville del.t *Swan Sc.*

TAB. CXCI.

WOODSIA INCISA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *WOODSIA*, Br. *Sori* dorsales, subrotundi. *Involucrum* calyciforme, apertum, laciniatum (margine crinitum, *Br.*); includens capsulas pedicellatas: *receptaculo* communi elevato nullo. *Br.* (paucis verbis mutatis.)

Woodsia *incisa*; minute glanduloso-pilosa, frondibus bipinnatis, pinnis lineari-oblongis, pinnulis approximatis obtuse duplicato-dentatis, soris submarginalibus, involucris demum laciniatis, laciniis ovatis incisis.

Woodsia incisa. *Gillies, MSS.*

Hab. In locis umbrosis montibus, prope "Mendozam, San Luis, et Cordovam," alt. 3,000—4,000 ped. *J. Gillies, M.D.*

Radix cæspitosa, fibrosa, fibris nigris, rigidulis, ramosis.

Stipites cæspitosi, plerumque breves, unciam ad quatuor uncias longi, erecti, pallide fusci, nitidi, inferne præcipue paleacei.

Frondes subspithamææ, lato-lanceolatæ, bipinnatæ. *Pinnæ*; *inferiores* oppositæ; *reliquæ* alternæ, horizontales, lineari-oblongæ, obtusæ, piloso-glandulosæ, flavo-virescentes: *pinnulæ* ovales, summæ confluentes, venosæ, duplicato-dentatæ. *Rachis* subsquamosa.

Sori subrotundi, versus marginem siti.

Involucrum inferum, demum in lacinias paucas ovatas membranaceas reticulatas incisas dehiscens.

Capsulæ brevi-pedicellatæ, globosæ, annulo lato incompleto cinctæ.

Semina flava, ovalia, subpellucida, margine punctato-scabra.

Fig. 1. Pinnula sorifera. f. 2. Involucrum cum capsulis. f. 3. Capsula dehiscens. f. 4. Semina. f. 5. Pili glandulosi:—*magn. auct.*

A very slight comparison of this plant with the *Woodsia Perinniana* (Tab. 68.) of this work, will suffice to show how closely the two Ferns are allied. In regard to genus, the involucre has precisely the same structure in both: but in their fronds we find a difference, particularly in the primary pinnæ, which in *W. Perinniana* are almost deltoid, while here they are linear-oblong; and in the pinnules, which in the former are pinnatifid, in the latter only toothed at the margin.

Blechnum trilobum

TAB. CXCII.

BLECHNUM TRILOBUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *BLECHNUM*, Linn. *Sori* lineares, continui, gemini, utrinque ad costam. *Indusia* membranacea, plana, versus costam dehiscentia.

Blechnum *trilobum*; frondibus lanceolatis pinnatis, pinnis alternis denticulatis apice mucronulatis, basi utrinque acute lobatis, sterilibus oblongis, fertilibus linearibus, soris marginalibus demum confluentibus.

Blechnum trilobum. *Presl, in Reliq. Hænk. p.* 50. *f.* 2.

Lomaria mucronata. *Gillies, MSS.*

Hab. In Peruvia. *Hænke.* In montibus Cordovæ, Americæ Meridionalis. *J. Gillies, M.D.*

Caudex longus, crassus, ater, nostris examplaribus longe descendens, superne radicosus, et hispido-squamosus.

Stipites cæspitosi, breves, pallide fusci, nitidi, membranaceo-squamosi.

Frondes erectæ, lanceolatæ, spithamææ, etiam pedales, præcipue fertiles, pinnatæ. *Pinnæ* alternæ, horizontaliter patentes, rigidæ, subserratæ, pubescenti-glandulosæ, apice mucronatæ, basi truncatæ et utrinque lobo acuto; *steriles* oblongæ, arcte dispositæ, virides; *fertiles* magis remotæ, lineares, fuscescentes.

Sori prope marginem siti continui, fere ad apicem, sed non ad basin, attingentes.

Capsulæ globosæ, sublonge pedicellatæ.

Semina subreniformia, pellucida, flavescentia.

Fig. 1. Pinna sterilis. f. 2. Portio pinnæ fertilis. f. 3. Capsulæ. f. 4. Semina. f. 5. Pili glandulosi:—*magn. auct.*

The fertile frond of this species is well figured and described by Presl in the *Reliquiæ Hænkeanæ*: and that plant, like ours, has the sori not extending to the two lobes at the base of the leaf. In this respect, and almost only in this respect, our Fern differs from one found in Juan Fernandez by Mr. D. Douglas and Dr. Scouler, in which the sori are continued round the margin of the lobes.

The sori in the present species and in the Juan Fernandez plant are so near to the margin as to claim as great affinity with *Lomaria* as with *Blechnum*; and the plant is probably not far removed from *Lomaria chilensis* of Kaulfuss.

Durea rhizophylla

Dr Greville delt

Swan sc.

TAB. CXCIII.

CÆNOPTERIS RHIZOPHYLLA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *CÆNOPTERIS*, Berg. *DAREA*, Juss., Sm., Willd. *Sori* lineares, submarginales. *Involucra* e venis lateraliter orta, exterius dehiscentia. *Willd.*

Cænopteris *rhizophylla*; fronde lanceolata bipinnata, pinnulis oblongo-ovatis subfalcatis integris, inferioribus cuneatis bi-trifidis, rachibus universalibus partialibusque alatis.

Cænopteris rhizophylla. *Smith, Ic. Pl. Ined. t.* 50. *Spreng. Syst. Veget. v.* 4. *p.* 91. *Swartz, Syn. Fil. p.* 88. *Ind. Occ. v.* 3. *p.* 1624.

Darea rhizophylla. *Willd. Sp. Pl. v.* 5. *p.* 300.

Darea trilobata, *Desv.* α. Asplenium uniseriale, *Raddi.* (fide Sprengelii).

Hab. In insulis Indiæ Occidentalis, præcipue Jamaicæ. *Swartz. Dom. Bancroft. D. Wiles.* In Brasilia. *Raddi.* (fide Sprengelii).

Radix fibrosa, fibris crassiusculis, nigris, paululum hirsutis, ramulosis.

Stipites cæspitosi, erecti, digitales, teretes, superne plani, marginati, fusci.

Frondes erectæ, spithamææ et ultra, circumscriptione lato-lanceolatæ, bipinnatæ; *pinnis* horizontaliter patentibus, oblongo-lanceolatis, subpetiolatis, inferioribus magis remotis; *pinnulis* plerisque oblongo-obovatis, subfalcatis, obtusis, terminali inferioribusque cuneiformibus, bi-trilobatis. *Rachis partialis* lato-alata, *universalis* marginata, ad extremitatem nonnunquam elongata et bulbifera.

Sori lineares. *Involucra* pleraque solitaria et extus dehiscentia, inferiora et terminalia, 2—3 in singula pinnula, interius dehiscentia, ut in *Aspleniis*.

Capsulæ longe pedicellatæ.

Semina subrotunda, reticulata, limbata.

Fig. 1. Pinna sorifera. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This Fern exhibits upon the same frond, and even upon the same universal pinna, the fructification both of *Cænopteris* and *Asplenium*; and the nature of this is well explained by the learned Brown: "*Cænopteris* ab *Asplenio* differt tantummodo pinnulis profunde incisis, lobis unifloris angustis, involucris inde marginem attingentibus et extus respectu lobi, intus vero quoad costam e qua vena fructifera ortum ducit, liberis: species quoque dantur frondibus partim *Asplenio* partim *Cænopteridi* respondentibus, et etiam in uno et eodemque involucro characterem utriusque generis exhibentibus." *Prodr. p.* 150.

Lindsæa microphylla

TAB. CXCIV.

LINDSÆA MICROPHYLLA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *LINDSÆA,* Dryander. *Sori* lineares, margine paralleli sæpiusque approximati. *Involucrum* ex apicibus venarum (una plurium) ortum ducens, exterius liberum. *Br.*

Lindsæa *microphylla;* frondibus subtripinnatis raris lanceolatis, pinnulis cuneatis, sterilibus crenulatis. *Br.*

Lindsæa microphylla. *Swartz, Syn. Fil. p.* 120. & 319. *Willd. Sp. Pl. v.* 5. *p.* 426. *Brown, Prodr. Fl. Nov. Holl. p.* 156. *Sieber, Syn. Fil. n.* 117. *Spreng. Syst. Veget. v.* 4. *p.* 80.

Hab. In Nova Hollandia (*Swartz.*). Apud Port Jackson. *D. Brown et Fraser.* In sylvis ad ripas "Brisbane River," lat. 27°. *Dom. Fraser.*

Radix, ut videtur, cæspitosa, e fibris crassiusculis nigris.

Stipites cæspitosi, digitales et ultra, pallide fusci, nitidi, hinc sulcati, inferne intense fusci, ad basin paleaceo-squamosi.

Frondes elongatæ, oblongo-lanceolatæ, tripinnatæ; pinnis primariis remotis, ovato-acuminatis, ultimis seu pinnulis cuneatis, membranaceis, glabris, pallide flavo-virescentibus, sæpe bifidis, fertilibus (nostris exemplaribus) ad apicem semper crenulatis, in sterilibus nunc integerrimis nunc crenulatis.

Costa tenuis, concolor, ante apicem evanescens.

Involucra transversim linearia, tenui-membranacea, apice crenulata, paulo infra apicem pinnularum inserta.

Capsulæ pedicellatæ, annulo fere completo lato cinctæ.

Semina subovalia, fusca.

Fig. 1. Pinnula sterilis. f. 2. Pinnula sorifera. f. 3. Portio pinnulæ cum soro et capsulis. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

The various expeditions which have been sent by the Government of New South Wales for the purpose of exploring the more remote parts of that vast territory, accompanied as they are in most instances by botanists of the greatest zeal and experience, have already been the means of making vast accessions to our knowledge of the plants of that country, and bringing us acquainted with the more extensive range of other species that had been previously known to us.

The present individual, which I believe had only been hitherto found in the neighbourhood of Port Jackson, has recently been discovered on the banks of the Brisbane River, upon the verge of the tropics, by Mr. Fraser, and by him communicated to us.

Asplenium Anceps

Dr. Greville delt

Swan Sc.

TAB. CXCV.

ASPLENIUM ANCEPS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *anceps*; fronde pinnata lineari-lanceolata, pinnis distinctis subpetiolatis, oblongis obtusis apice margineque superiore crenulatis, basi abruptis, inferioribus sursum auriculatis, soris distinctis, rachi stipiteque nitidis fuscis triangularibus alato-marginatis. *Lowe, MSS.*

Asplenium anceps. *Solander, in Banks. Herb.*

Asplenium fallax. *Lowe, MSS.*

Hab. In rupibus umbrosis Madeiræ; *Masson, in Herb. Banks.:* ubi etiam legit *Rev. T. Lowe*, in montibus, ab alt. 1,500 ad 5,000 ped., et nobis benevole communicavit.

Radix fibroso-cæspitosa, fibris ramosis, nigro-fuscis.

Stipites cæspitosi, breves, purpuraceo-fusci, nitidi, triangulares, angulis acutis subalatis.

Frondes spithamææ ad pedalem, lineari-lanceolatæ, basi apiceque attenuatæ, pinnatæ. *Pinnæ* fere semper oppositæ, approximatæ, horizontaliter patentes, semiunciales et ultra, oblongæ, rigidiusculæ, intense virides, glabræ, subtus minute scabriusculæ, apice margineque superiore magis minusve crenatæ, basi transversim truncatæ et subpetiolatæ, sursum auriculatæ. *Rachis* stipiti similis, atro- vel fusco-purpurea, nitida, triangularis, marginibus vel angulis anguste alatis membranaceis.

Sori, utrinque intra costam et marginem positi, oblique lineares.

Capsulæ globosæ, longe pedicellatæ.

Semina subovalia, fusca.

Fig. 1. Pinna, cum portione rachidis, a dorso visa. f. 2. Eadem subtus visa, cum soris. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

The present plant was some time ago communicated to us by our valued friend the Rev. T. Lowe, from the island of Madeira, with his MS. name of *Asplenium fallax*, on account of its affinity with our *Aspl. Trichomanes:* but on his first return to England he ascertained, by an examination of the Banksian Herbarium, that it had been previously found by Mr. Masson, and was deposited in that inestimable collection with the name of *Aspl. anceps* of Solander. This appellation he does not hesitate in adopting, although it is not entirely applicable to the three angles of the stipes and rachis.

In Madeira it entirely usurps the place of *Aspl. Trichomanes*, growing generally to a span in height: but a specimen gathered by Mr. Lowe at the Ribeiro d'Ametade, at an elevation of nearly 4000 feet above the level of the sea, exceeds a foot in length.

It is to our peculiar satisfaction, that at the very moment we are engaged in writing this description, we hear that our friend Mr. Lowe has again for a short time visited England, and is preparing an account of his new Madeira plants for publication in the Cambridge Philosophical Transactions. They will be compared with the Banksian Herbarium, and will form a very valuable memoir.

Hymenophyllum trisidum

TAB. CXCVI.

HYMENOPHYLLUM TRIFIDUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *trifidum;* fronde lineari-elongata pinnata, pinnis cuneatis profunde trifidis, laciniis oblongis obtusis rarius ciliatis, involucris suborbicularibus longe ciliatis.

Hab. In truncis arborum apud "Esmeraldas," regno Peruviano, alt. 5,000 ped. *Prof. Gul. Jameson.*

Caudex a nobis non visus.

Stipes brevis, unciam vel sesquiunciam longus, gracilis, filiformis.

Frons spithamæa, circumscriptione linearis, pinnata; pinnis sesquipollicaribus remotiusculis, oblique cuneatis subdecurrentibus, costatis, obscure et minute reticulatis, profunde trifidis, rarius quadrifidis, marginibus hic illic ciliatis, pilis nunc bipartitis; segmentis lineari-oblongis, obtusis, omnibus (nisi in pinnis 2—3 inferioribus) soriferis.

Involucra solitaria, terminalia, in singula lacinia pinnarum, orbicularia, fuscescentia, basi immersa, cuneata, superne bilabiata, labiis suberosis longe ciliatis.

Receptaculum parvum, omnino inclusum, ad apicem capsuliferum.

Capsulæ paucæ, fuscæ, annulo completo cinctæ.

Semina fusca, subpellucida, globosa, paululum angulata.

Fig. 1. Portio frondis cum pinnis duabus soriferis. f. 2. Apex laciniæ cum receptaculo capsulifero. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This beautiful *Hymenophyllum* may truly be reckoned among the most distinct of a genus, the limits of whose species are in general not easily defined. It is remarkable for its long linear fronds, which are regularly pinnated with almost equal-sized pinnæ from near their summit, and these bearing ciliated sori at the extremity of their trifid segment. Professor William Jameson has been peculiarly fortunate in discovering many new and highly curious species of Fern in the vicinity of Esmeraldas; and there is no question but other parts of Peru would equally reward the labours of a botanist in this and other departments of the science.

Hymenophyllum nitens

Drᵉ Greville delt

Swan Sc.

TAB. CXCVII.

HYMENOPHYLLUM NITENS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *nitens;* frondibus tripinnatifidis lanceolatis glabris, laciniis linearibus obtusis subemarginatis integris, involucris terminalibus, valvis oblate orbicularibus. *Br.*

Hymenophyllum nitens. *Brown, Prodr. Fl. Nov. Holl. p.*159. *Spreng. Syst. Veget. v.*4. *p.*131.

Hab. In insula Diemen. *Brown.* In Nova Zealandia. *Dom. Menzies.*

Caudex repens, gracilis, flexuosus, inferne radicosus.

Stipes subdigitalis, filiformis, fuscus, nudus, glaber.

Frons late ovato-lanceolata, superne attenuata, tripinnatifida (inferne pinnata, pinnis bipinnatifidis); pinnis vel segmentis primariis remotiusculis, circumscriptione late ovatis acutis, secundariis approximatis, etiam imbricatis, ultimis seu laciniis linearibus obtusis, glabris, nitidis, costatis, compacte reticulatis, integerrimis, costatis, costa infra apices obliterata.

Color totius plantæ, siccitate, fuscus.

Involucra terminalia, solitaria, obovata, basi cuneata immersa, bilabiata; labiis rotundatis, integerrimis.

Receptaculum inclusum, infra apicem capsuliferum.

Capsulæ ut in plerisque hujusce generis.

Semina trigona, pellucida.

Fig. 1. Portio frondis fructifera. f. 2. Involucrum ad apicem laciniæ. f. 3. Receptaculum cum capsulis. f. 4. Semina:—*magn. auct.*

The specimens here figured are communicated by our liberal friend A. Menzies, Esq., under the name now given, and were gathered by him in New Zealand.

Hymenophyllum gracile

Dr Greville delt

Swan Sc.

TAB. CXCVIII.

HYMENOPHYLLUM GRACILE.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *gracile;* fronde pinnata, pinnis remotis bipinnatifidis laciniis linearibus obtusis integris bifidisve, rachi marginata, involucra late subrotunda, basi cuneata immersa.

Hymenophyllum gracile. *Bory. Willd. Sp. Pl. v.* 5. *p.* 527. *Spreng. Syst. Veget. v.* 4. *p.* 131.

Hab. In sylvis insulæ Mauritii. *Dom*^{i} *Bory, Bojer, Carmichael.*

Caudex, ut in plurimis hujusce generis, gracilis, flexuosus, ramosus, hic illic radiculoso-fibrosus.

Stipes erectus, atro-fuscus, nudus, 2—3 uncias longus.

Frons digitalis et ultra, circumscriptione ovata, pinnata; pinnis alternis remotis, bipinnatifidis, glabris, siccitate fusco-badiis, laciniis linearibus, integerrimis, obtusis, simplicibus vel bifidis, minute reticulatis.

Involucra ad apices laciniarum, solitaria, semi-immersa, fere orbicularia, magis lata quam longa, inferne cuneata, superne bilabiata, labiis semiorbicularibus.

Receptaculum inclusum, breve stipitatum, apice capsuliferum.

Capsulæ orbiculares, compressæ, annulo completo cinctæ.

Semina subangulata, pellucida, obscure reticulata.

Fig. 1. Pinna fructifera. f. 2. Laciniæ pars, cum involucro. f. 3. Receptaculum capsuliferum. f. 4. Semina:—*magn. auct.*

Like some others of the genus, the present species, in a dry state at least, is of an almost chestnut-brown colour: it has a peculiar aspect, in consequence of its remote pinnæ and not very numerous laciniæ.

Trichomanes trichoideum

Dr. Greville del.

J. Swan Sc.

TAB. CXCIX.

TRICHOMANES TRICHOIDEUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *trichoideum;* fronde lato-lanceolata tripinnatifida laxe reticulata, laciniis capillaceo-linearibus integerrimis glabris bifidis segmentis emarginatis, involucris lateralibus stipitatis, ore dilatato integro.

Trichomanes trichoideum. *Swartz, Syn. Fil. p.* 144. *Fl. Ind. Occ. v.* 3. *p.* 1741. *Willd. Sp. Pl. v.* 5. *p.* 509. *Spreng. Syst. Veget. v.* 4. *p.* 130.

Trichomanes pyxidiferum. *Schkuhr, Fil. t.* 134.

Hab. In Jamaica. *Swartz. Gul. Bancroft, M.D.* Arboribus inter Quito et Esmeraldas Americæ Meridionalis: alt. 6000 ped. *Prof. Gul. Jameson.*

Caudex gracillimus, filiformis, longe repens, intricatus, radiculosus, paululum tomentosus.

Stipes erectus, filiformis, glaber, pallide rufo-fuscus, nudus, unciam vel duas ad tres uncias longus.

Frons erectus, digitalis, nunc palmaris, circumscriptione lato-lanceolata, basi apiceque attenuata, 3-pinnatifida, glabra, pallide viridia, subsucculenta, reticulatim venosa, laciniis omnibus capillaceo-linearibus, obtusis, integris vel emarginatis bifidisque, costata, costa concolori.

Involucra sparsa, solitaria, lateralia, subcylindracea, basi in stipitem brevem attenuata, ore dilatato, subintegro.

Receptaculum filiforme, involucro duplo triplove longius, basi intra involucrum capsuliferum.

Capsulæ compresso-sphæricæ, annulo completo cinctæ.

Semina minuta, exacte globosa.

Fig. 1. Portio frondis cum involucro. f. 2. Receptaculi pars inferior cum capsulis. f. 3. Capsula subtus visa. f. 4. Semina:—*magn. auct.*

The specimens here figured of this slender and graceful Fern were gathered by Professor William Jameson of Quito, between that city and Esmeraldas, growing abundantly in one spot on the trunk of a tree, at an elevation of 6000 feet above the level of the sea. These specimens are so much larger than the generality of those we have received from Jamaica, that we were at first disposed to consider them distinct: but a more careful examination satisfied us that the differences are only owing to a greater luxuriance of growth, such as are occasionally observed even in Jamaica.

The *Tr. meifolium* of Bory, from the Isle of Bourbon, differs in its rigid segments and setose rachis.

Lycopodium arbuscula

Decreville delt

Jean...

TAB. CC.

LYCOPODIUM ARBUSCULA.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3 valves, corpusculis 1—6-globosis.

Lycopodium *Arbuscula;* caule radicante ramoso, foliis bifariis horizontalibus cordato-ovalibus acutis obscure nervosis, margine superiori præcipue ciliato-serratis ramulorum angustioribus subfalcatis, stipulis cordatis mucronato-acuminatis serratis, spicis sessilibus linearibus.

Lycopodium Arbuscula. *Kaulf. Enum. Fil. p.* 20. *Spreng. Syst. Veget. v.* 4. *p.* 17.

Hab. In insulis Sandvicensibus: Owahu. *Chamisso.* Owhyhee. *Dom. Menzies.*

Caulis spithamæus, basi nudus et radicans, dein, ut videtur, erectus, foliosus, superne præcipue ramosus, ramis erecto-patentibus, flexuosis, pinnatim bipinnatimque divisis.

Folia bifaria, horizontalia, subcoriacea, intense viridia, superne imbricata, cordato-ovalia, acuta, versus apicem serrata, versus basin marginis superioris ciliata, basi inferiori integerrima; ramulorum *folia* magis elongata, subfalcata: omnia nervosa, nervo obscuro ante apicem evanescente.

Stipulæ foliis triplo minores, imbricatæ, cordatæ, acuminatæ, paululum obliquæ, obscure nervosæ, mucronatæ, ciliato-dentatæ, ad basin utrinque ciliatæ.

Spicæ in ramulis terminales, subsemipollicares, angustæ, lineares, tetragonæ. *Squamæ* capsuliferæ cordato-acuminatæ, rigidæ, ciliato-dentatæ, basi concavæ.

Capsulæ bivalves, reniformi-rotundatæ, rubro-aurantiacæ; *aliæ* corpusculis globosis, simplicibus, 4—5; *aliæ* granulis ternatim congestis, seu farinis repletæ.

Fig. 1. Portio caulis cum foliis stipulisque. f. 2. Apex ramuli fructiferi. f. 3. Squama, cum ejus capsula corpusculis sphæricis. f. 4. Capsula farinifera. f. 6. Farina:—*magn. auct.*

Although the description given by Kaulfuss of his *L. Arbuscula* is somewhat at variance with ours, yet we are of opinion that the same species was intended by him as that which we have here represented. It comes from the same group of islands; and at Owhyhee was found so long ago as during the voyage of Captain Vancouver.

Trichomanes Ankersii.

Wm Greville delt.

Swan Sc.

TAB. CCI.

TRICHOMANES ANKERSII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *TRICHOMANES,* Sm., Sw. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *Ankersii;* caudice repente scandente, frondibus copiosis assurgentibus lato-lanceolatis brevissime stipitatis profunde pinnatifidis, laciniis oblongis obtusis patentibus angulato-dentatis inferioribus nonnunquam iterum pinnatifidis, involucris subcylindraceis pedicellatis plerumque solitariis ad basin superiorem fere omnium laciniarum.

Trichomanes Ankersii. *Parker MSS.*

Hab. Demerara. *D. J. Ankers.*

Caudex longissime repens, filiformis, subtus radiculas brevissimas emittens, frondibus quasi pinnatus.

Frondes alternæ, numerosæ, palmares ad spithamæam, assurgentes, brevissime stipitatæ, oblongo- vel lato-lanceolatæ, basi sublatiores, profunde pinnatifidæ, rigido-membranaceæ, pulcherrime reticulatæ, nitidiusculæ, siccitate nigrescentes. *Laciniæ* subhorizontaliter patentes, unciam longæ, obtusæ, distincte pinnatim nervosæ, angulato-dentatæ, supremis minoribus, integræ, inferioribus nunc iterum subpinnatifidæ, vel basi inferiore lobatæ.

Involucra suburceolato-cylindracea, exserta, etiam pedicellata, plerumque solitaria, ad basin superiorem fere omnium laciniarum, erecta, ore brevi-dilatato, vix bilabiato.

Receptaculum longissime exsertum, involucro fere quadruplo longius.

Capsulæ suborbiculares, peltatæ, annulo latissimo cinctæ.

Semina globoso-angulata, viridescentia, nunc obscure reticulata.

Fig. 1. Portio frondis cum involucro. f. 2. Portio laciniæ frondis. f. 3, 4. Capsulæ. f. 5. Semina:—*magn. auct.*

We are indebted to our excellent friend C. S. Parker, Esq. of Liverpool, who has paid particular attention to the Ferns of Guiana, for specimens of this beautiful and hitherto undescribed species of *Trichomanes*. It was discovered in Demerara by Mr. James Ankers, manager of Plantation Coffee-Grove, Essequibo; to whom, through the kindness of Mr. Parker, our collections are indebted for many rare specimens of plants of that country, especially aquatic ones,—such as *Parkeria pteridioides*, *Marsilea polycarpa*, *Hydromystria stolonifera*, *Pontederia cærulea*, &c. We gladly, therefore, accede to Mr. Parker's wishes in dedicating this plant to its discoverer.

In its mode of growth, *T. Ankersii* is allied to *T. radicans;* in its fronds, to *T. sinuosum* and *crispum*, from both of which its fructification is totally at variance.

1

2

3

4

Dr. Greville delt

Aspidium aculeatum

Swan Sc.

TAB. CCII.

ASPIDIUM COADUNATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPIDIUM*, Br. *HYPOPELTIS*, Mich. *ASPIDII species*, Sw., Willd. *Sori* rotundi, dorsales. *Involucrum* peltatum, orbiculare, stipitatum, in medio sori insertum, undique liberum. *Br.*

Aspidium *coadunatum;* fronde bipinnata, pinnulis lato-lanceolatis acuminatis pinnatifidis crenatis membranaceis reticulatis supra scabris superioribus coadunatis, soris (parvis), stipite elongato rachibusque atro-purpureis nitidis.

Aspidium coadunatum. *Wall. in Cat. of Pl. in Herb. Mus. of E. I. C. No.* 377.

Polypodium oligocarpum? *Herb. Hayne* (*Wall.*).

Hab. Nepal; Kamoun; montibus apud Sylhet; Chappadong. *N. Wallich, M.D.*

Stipes pedalis ad semipedalem, erectus, semiteres, diametro 3—4 lineas, hinc sulcatus, intense atro-purpureus, nitidus.

Frons inter maximas bi-tripedalis, ampla, bipinnata. *Pinnæ* petiolatæ; *primariæ* late ovato-acuminatæ; *secundariæ* seu *pinnulæ* lato-lanceolatæ, pinnatifidæ; *superiores* crenato-lobatæ, coadunatæ, omnes membranaceæ, venoso-reticulatæ, supra pubescenti-scabræ, subtus omnino glabræ, laciniis oblongo-ovatis obtusis vel raro acutis, lato-crenatis. *Rachis primaria* fusco-purpurea, nitida; *secundaria* fusca.

Sori in venas secundarias inserti intra marginem et nervum laciniarum lineatim dispositi serie simplici, parvi.

Involucrum orbiculare, peltatum, margine undulato.

Capsulæ longe stipitatæ.

Semina globosa, fusca, limbo pellucido angulato cincta.

Fig. 1. Lacinia sorifera frondis. f. 2. Involucrum cum soro. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This very fine species of *Aspidium* seems to have been discovered by Dr. Wallich and his collectors solely in the interior of the vast continent of Asia, where so many other novelties of this tribe have been found. It is very distinct from any with which we are acquainted, and well distinguished by the coadunate upper pinnules (as its name implies), and by its deep black-purple and glossy stipes and rachis.

TAB.CCIII.

Polypodium hastifolium.

Dr. Greville del.

Swan Sc

TAB. CCIII.

POLYPODIUM HASTÆFOLIUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *POLYPODIUM*, Swartz. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium *hastæfolium;* frondibus pinnatis, pinnis lineari-lanceolatis obtusis integerrimis hastatis petiolatis, superioribus inferioribusque sessilibus basi truncatis, soris solitariis, stipite superne pubescente. *Willd.*

Polypodium hastæfolium. *Swartz, Syn. Fil. p.* 36. *Fl. Ind. Occ. v.* 3. *p.* 1653. *Spreng. Syst. Veget. v.* 4. *p.* 53. (P. hastatum).

Hab. In rupibus Jamaicæ interioris, solo cretaceo et argillaceo. *Swartz.*

Caudex brevis, subrepens, squamosus, radicosus. *Radices* capillares, fuscæ, ramosæ.

Stipites 2—3 uncias longi, erecti, angulati, ad basin usque pubescentes, inferne præcipue paleaceo-squamosi.

Frondes 4—6-pollicares, erectæ, subrigidæ, lanceolatæ, pinnatæ. *Rachis* ubique pubescens. *Pinnæ* alternæ breviter petiolatæ, horizontaliter patentes, lanceolatæ, obtusiusculæ, coriaceæ, glabræ, basi hastatæ, lobis duobus acuminatis porrectis, subtus nervosæ, margine paululum revoluto; *infimæ supremæque* minores, subdeltoideæ.

Sori subrotundi, ad latera costæ serie solitaria dispositi.

Capsulæ subsphæricæ, late annulatæ, breviter pedicellatæ.

Semina ovali-subreniformia, flavo-fusca, reticulata.

Fig. 1. Pinna fructifera. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This plant in habit more resembles an *Aspidium* than a *Polypodium;* but it is evident that the fructification is destitute of an involucre. Swartz had himself first called this plant *P. hastatum*, but afterwards altered it to *P. hastæfolium*, to distinguish it from *P. hastatum* of the *Flora Japonica*.

TAB. CCIV.

Trichomanes
Bancroftii.

Dr. Greville del.

Swan

TAB. CCIV.

TRICHOMANES BANCROFTII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *TRICHOMANES,* Sm., Sw. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *Bancroftii;* frondibus ovato-deltoideis profunde bi-tripinnatifidis, laciniis lato-linearibus obtusissimis integerrimis minute reticulatis marginibus parce pilosis, involucris cylindraceo-campanulatis omnino immersis, ore dilatato vix bilabiato, stipite superne late alato.

Hab. Insula Jamaicæ. *N. Bancroft, M.D.; DD. Wiles & Higson.* Demerara. *D. Parker.*

Caudex, ut videtur, brevis, repens, radiculas filiformes flexuosas ramosas subtus emittens.

Stipites bi-tripollicares, erecti, inferne semiteretes, nudi, superne late alati.

Frons ovato-deltoidea, subdigitalis, profunde bi-tripinnatifida, elastico-membranacea, rigidiuscula, minute reticulata, obscure viridis; *laciniæ primariæ* subhorizontaliter patentes, circumscriptione ovatæ, segmentis linearibus obtusis, unicostatis, integerrimis, margine sparsim pilosis, pilis clavatis, biarticulatis.

Involucra semper ad apices laciniarum, omnino immersa, et ita latissime alata, cylindraceo-campanulata; ore perbrevi, obscure bilabiato, labiis demum patentibus.

Receptaculum valde exsertum, involucro quintuplo longius.

Capsulæ orbiculares, peltatæ, annulo lato cinctæ.

Semina ovali-globosa.

Fig. 1. Portio frondis cum involucris. f. 2. Portio laciniæ. f. 3. Pilus e margine frondis. f. 4, 5. Capsulæ. f. 6. Semina.

This species of *Trichomanes* we have received both from Jamaica and from Guiana. Our specimens from the latter country, sent to us by Mr. Parker, were accompanied by the observation, —which is perfectly correct,—that the species approaches to the *T. pyxidiferum* of Swartz, and the *Trichomanes* of Plumier, *tab.* 50. *f.* E.; but that the fronds are deltoid instead of ovato-acuminate, and that the involucres are invariably terminal, never "in axillis foliorum" as figured by Plumier and described by Swartz: to which we may add, that Swartz speaks of the involucres as subpedicellate, and only margined at their base; whereas in our plant they are most distinctly immersed. Hence we cannot hesitate in considering the species as new, and we are anxious to dedicate it to our friend Dr. Bancroft, to whom we are indebted for a very considerable collection of the Ferns of Jamaica.

The plants of this species vary in size, as may be seen by the figures; but the essential characters are invariable throughout.

Acrostichum subdiaphanum.

Dr Greville delt

Swan Sc.

TAB. CCV.

ACROSTICHUM SUBDIAPHANUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *subdiaphanum;* frondibus oblongis subsucculentis acutis marginatis arcte parallelim venosis supra squamosis subtus ferrugineo-punctatis, fertilibus linearibus, stipite costaque subtus paleaceo-squamosis.

Hab. Insula Sanctæ Helenæ. *Alex. Walker, olim Insulæ Præfectus; D. Dallas.* Prope Madras. *G. Wight, M.D.*

Caudex repens, crassus, densissime paleaceo-squamosus; *paleis* laxis, lanceolatis, membranaceis, nitidis, fuscis, pulcherrime et tortuosim reticulatis basi cordatis, subtus radices filiformes emittens.

Stipites digitales et ultra, erecti, hinc sulcati, squamis numerosis magnis laxis fuscis obsiti.

Frondes 5—8 uncias longæ, coriaceo-succulentæ, subdiaphanæ, siccitate undulatæ, oblongæ, acutæ, marginatæ, costatæ, oblique et arcte dichotome parallelim venosæ, supra squamis subcordato-rotundatis, laceratis sæpissime peltatis sparsim obsitæ, subtus minute ferrugineo-punctatæ. *Costa* supra plana, nudiuscula, subtus laxe paleaceo-squamosa, squamis ut in caudice et stipite. *Frondes fertiles* longius stipitatæ lineares.

Capsulæ totum dorsum frondis tegentes, fuscæ, globosæ, lato-annulatæ, longiuscule stipitatæ.

Semina subreniformia.

Fig. 1. Portio frondis sterilis cum squamis. f. 2. Portio frondis subtus visa. f. 3. Capsulæ. f. 4. Semina. f. 5. Squama e stipite:—*magn. auct.*

This is the second new species of *Acrostichum* which we have figured from the island of St. Helena; and it is not a little remarkable, that in both instances we have received the same species also from Madras, through Dr. Wight. That now given is no less distinct than the former one (*A. dimorphum*) from all others which are known to us, and is remarkable for its thick and somewhat fleshy texture, causing it to shrivel to a certain extent in drying, and for its subpellucid frond. The nerves are closely placed and very conspicuous; and while the upper side is partially covered with small somewhat peltate scales, the under is marked with rush-coloured dots.

Trichomanes pyxidiferum.

Dr Greville delt

Swan Sc.

TRICHOMANES PYXIDIFERUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *pyxidiferum;* frondibus oblongo-ovatis pinnatis, rachi alata, pinnis bipinnatifidis membranaceis pellucidis subnitidis, laciniis linearibus glabris integerrimis apicibus emarginatis, involucris solitariis in lacinia brevi axillari immersis cylindraceis, ore patentissimo concavo integro, receptaculo longissimo filiformi, stipite superne marginato.

Trichomanes pyxidiferum. *Linn. Sp. Pl. p.* 1561? *Swartz, Fl. Ind. Occ. v.* 3. *p.* 1739. *Syn. Fil. p.* 143. *Willd. Sp. Pl. v.* 5. *p.* 508. *Spreng. Syst. Veget. v.* 4. *p.* 129.

Trichomanes pedicellatum. *Desv.* (fide Sprengel).

Filicula pyxidifera. *Plum. Fil. p.* 74. *t.* 50. *f.* E.

Hab. In India Occidentali. Hispaniola. *Plumier.* Insula Jamaicæ. *Swartz.* Insula Sancti Vincentis. *Rev. L. Guilding.*

Caudex filiformis, flexuosus, repens, radiculosus.

Stipites erecti, graciles, inferne subteretes, superne marginati, unciam ad duas uncias longi.

Frons digitalis, circumscriptione oblongo-ovata, pinnata, membranacea, glaberrima, diaphana, subnitida, pulcherrime reticulata, rachi alata superne præcipue, inferne potius marginata. *Pinnæ* laxæ, remotiusculæ, erecto-patentes, profunde bipinnatifidæ; laciniis linearibus, costatis, apicibus emarginatis.

Involucra solitaria, in lacinia brevi axillari immersa, subcylindracea, ore dilatato, magno, patentissimo, integerrimo.

Receptaculum longissime exsertum, involucro octies longius, fragile, flexuosum, filiforme.

Capsulæ globoso-compressæ, peltatæ, annulo latissimo cinctæ.

Semina intense fusca, ovali-globosa, subangulata.

Fig. 1. Portio frondis cum involucro. f. 2. Involucrum. f. 3. Laciniæ pars. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

Sir James Smith has well observed, under the article "*Trichomanes pyxidiferum*" in Rees's Cyclopædia, that our only certain authority for this species is Plumier, in the work above quoted, the description of Swartz not answering exactly to his account.—If we are correct in our ideas of *T. pyxidiferum,* Swartz's description is by no means inaccurate, except where he says that the columella or receptacle is shorter than the involucre; but then it ought to be considered that this columella, though longer than in any other species of the genus that we are acquainted with, is very fragile, and the description might have been taken from imperfect specimens: and in all that concerns the rest of the plant it is very satisfactory. With regard to our considering this species to be the *Filicula pyxidiferum* of Plumier, the general outline of the frond is sufficiently characteristic: the wing of the rachis, and more especially of the stipes, is, however, certainly too broad. A remarkable character is described by Plumier in the fructification of this plant; for the fronds, he says, are "garnies la pluspart, dans le fond de leur découpure, d'une petite boëte, ou calice, rempli de plusieurs vesicules, et scelé par un couvercle garni d'un petit poil dans le milieu." Now that the involucres should be closed by a convex lid, through which the columella is continued, we consider to be a circumstance impossible in the genus: but we can very well believe that, to an eye unassisted by the microscope, the large expanded and entire (not two-lipped) mouth of the involucre may have the appearance of a lid. And this dilatation of the mouth of the involucre is more remarkable than in any other species of the genus we are acquainted with. We shall be happy if other botanists concur with us in this opinion, and thus determine with tolerable satisfaction the identity of a species, which no one seems to have understood since the time of Plumier.

Our figures and description are made from numerous specimens communicated by Mr. L. Guilding from the Island of St. Vincent, where, upon trunks of trees, at an elevation of from fourteen hundred to two thousand feet above the level of the sea, the plant is very abundant, as it also probably is in other of the West Indian Islands.

Lomaria Gilliesii

Wm Greville delt.

TAB. CCVII.

LOMARIA GILLIESII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *LOMARIA*, Willd. *Sori* lineares continui pinnas lineares frondis diversæ occupantes. *Indusia* marginalia vel submarginalia, conniventia, involventia. *Kaulf.*

Lomaria *Gilliesii*; pinnata, frondis sterilis pinnis oblongis acutis brevissime petiolatis oblique lineatis margine cartilagineo-serratis basi cordatis, fertilis linearibus apice ultra soros serrulatis.

Hab. Prope Mendoza. *J. Gillies, M.D.*

Caudex repens, squamosus, squamis paleaceis, magnis, nitidis, ferrugineis.

Stipites digitales, erecti, subangulati, pallide flavo-fusci, glabri, nudi, aut ad basin solummodo squamosi.

Frondes circumscriptione late ovatæ, pinnatæ; *pinnis* approximatis, alternis, 15—16, brevissime petiolatis, horizontaliter patentibus, oblongis, acutis vel acutiusculis, subcoriaceis, pallide viridibus, dense nervoso-lineatis, basi cordatis nunc subobliquis, margine argute cartilagineo-serratis; *fertilibus* magis remotis, dimidio longioribus, lineatis, marginibus revolutis, apicem versus solummodo serratis planis.

Sori lineares, continui, versus marginem siti.

Involucrum lineare, arcuatum, continuum, marginibus laceratum.

Capsulæ in nervos laterales insertæ, globosæ, annulatæ, sublonge stipitatæ.

Semina ovalia, reniformia, limbata, limbo crenato.

Fig. 1. Portio pinnæ fertilis. f. 2. Pars ejusdem. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This is certainly allied to the *Lomaria* (*Stegania* Br.) *procera*, from New Holland; but that has very narrow fertile pinnæ and a chaffy stipes: and, according to the description, also to *L. ornifolia* Presl, which, however, has the pinnæ only serrated at the extremity.

TAB. CCVIII.

Hymenophyllum peruvianum.

D.r Greville delt.

Swan Sc.

TAB. CCVIII.

HYMENOPHYLLUM PERUVIANUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *peruvianum;* fronde oblongo-lanceolata pinnata, pinnis pinnatifidis, laciniis lato-linearibus reticulatis obtusis spinuloso-serratis, pinnarum inferiorum nonnunquam furcatis, involucris obovatis semibilabiatis spinuloso-serratis ad basin superiorem solitariis vel binis fere omnium pinnarum, rachi superiore marginata.

Hab. Ad arborum truncos in sylvis apud Esmeraldas, regno Peruviano; alt. 5000 ped. *Prof. Gul. Jameson.*

Caudex repens, filiformis.

Stipes bipollicaris, gracilis, erectus, nudus.

Frons palmaris, circumscriptione oblongo-lanceolata, pinnata; *pinnis* subapproximatis, pinnatifidis, membranaceis laxe reticulatis, siccitate fuscescentibus; *laciniis* erecto-patentibus, lato-linearibus, obtusis, spinuloso-serratis, costatis, pinnulis inferioribus superne in involucrum mutatis.

Involucra obovata, inferne teretia, superne compressa, semibilabiata, labiis spinuloso-serratis.

Receptaculum inclusum, involucro subdimidio brevius, capsulis omnino tectum.

Capsulæ globoso-compressæ, peltatæ, reticulatæ, annulo lato completo cinctæ.

Semina angulato-globosa, pallide flavescentia, pellucida.

Fig. 1. Portio pinnæ cum involucro. f. 2. Involucri portio cum capsulis. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This is another of the many interesting novelties of this tribe, for which we are indebted to our valuable correspondent Professor William Jameson of Quito. It possesses a remarkable character in the situation and direction of the involucres, for they are placed at the base of the upper margin of the pinnæ, all pointing upwards, and as it were in the centre of the plant, and taking the place of laciniæ, which exist in the same situations in the sterile pinnæ.

Polypodium
hirtipetiolum.

Descriptive Account of the Species of Polypodium.

Polypodium hirtipetiolum. Wall. Cat. n. 1. Hook. Sp. Fil. 1. p. 1.

Rhizoma creeping, densely clothed with ferruginous hairs. Fronds distant, lanceolate, pinnatifid, glabrous above, hairy beneath, on hairy petioles. Segments linear, obtuse, entire. Veins simple, parallel. Sori in a single row between the veins, near the margin.

Hab. Nepal, Wallich.

Rhizoma creeping, densely clothed with ferruginous hairs. Fronds distant, lanceolate, pinnatifid, glabrous above, hairy beneath, on hairy petioles. Segments linear, obtuse, entire. Veins simple, parallel. Sori in a single row between the veins, near the margin.

Hab. Nepal, Wallich.

Descriptive Account of the Species of Polypodium.

Polypodium hirtipetiolum. Wall. Cat. n. 1. Hook. Sp. Fil. 1. p. 1.

Rhizoma creeping, densely clothed with ferruginous hairs. Fronds distant, lanceolate, pinnatifid, glabrous above, hairy beneath, on hairy petioles. Segments linear, obtuse, entire. Veins simple, parallel. Sori in a single row between the veins, near the margin.

Hab. Nepal, Wallich.

POLYPODIUM TRIDACTYLUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *PTERIS,* Linn. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium *tridactylum;* fronde digitato-tripartita, laciniis lanceolato-acuminatis integerrimis reticulatis glabris, soris sparsis, stipite elongato.

Polypodium tridactylum. *Wall. Cat. of Pl. in Mus. E. I. C. No.* 315.

Hab. In montibus apud Sylhet. *N. Wallich, M.D.*

Caudex repens, crassitie pennæ anserinæ, subtortuosa, radiculas numerosas ramosas flexuosas emittens.

Stipites digitales ad semipedalem, erecti, semiteretes, glabri, omnino nudi.

Frons palmaris ad spithamæam, simplex, profunde digitato-tripartita, laciniis lanceolatis, attenuatis, integerrimis, costatis, reticulatis, utrinque glaberrimis, membranaceis, intermedia longiore, lateralibus erecto-patentibus, subflexuosis.

Sori sparsi, hemisphærici, venulis secundariis inserti.

Capsulæ subglobosæ, compressæ, reticulatæ, lato-annulatæ, annulo fere completo, longe pedicellatæ.

Semina reniformia, albescenti-pellucida.

Fig. 1. Portio frondis cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Perhaps this species is more nearly allied to some of the varieties of *P. phymatodes* than to any other; but the fronds are by no means coriaceous, nor are the sori at all immersed. *P. Stemionitis* Cav., according to the description, differs in the sori being arranged in a series.

TAB. CCX.

Polypodium hexagonopterum.

TAB. CCX.

POLYPODIUM HEXAGONOPTERUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *POLYPODIUM*, Linn. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium *hexagonopterum;* frondibus deltoideis bipinnatifidis, pinnis duabus infimis deflexis, laciniis oblongo-lanceolatis obtusis ciliatis pinnarum inferiorum profunde crenatis, reliquarum integerrimis, infimis adnato-decurrentibus, soris minutis prope costam sparsis.

Polypodium hexagonopterum. *Mich. Fl. Bor. Am. v.* 2. *p.* 271. *Swartz, Syn. Fil. p.* 40. *Pursh, Fl. Am. v.* 2. *p.* 659. *Willd. Sp. Pl. v.* 5. *p.* 200. *Spreng. Syst. Veget. v.* 4. *p.* 57.

P. Phegopteris. *Schkuhr, Fil. t.* 20. *b.*

Hab. In America Septentrionali, a Canada usque ad Carolinam.

Stipes erectus, spithamæus ad pedalem, glaber, nitidissimus, hinc sulcatus, basi solummodo paleaceo-squamosus.

Frons spithamæa ad ultra, circumscriptione deltoidea, bipinnatifida; *pinnis* duabus inferioribus deflexis, reliquis horizontaliter patentibus, omnibus lato-lanceolatis, profunde pinnatifidis, tenui-pubescentibus, subtus rachibus costisque præcipue; *laciniis* oblongo-lanceolatis, paululum falcatis, inferioribus lato-crenatis, superioribus integerrimis, infimis adnato-decurrentibus, omnibus ciliatis reticulatim venosis, venulis soriferis. *Substantia* membranacea, tenuis.

Sori parvi, sparsi, subrotundi.

Capsulæ globosæ, annulatæ, brevissime stipitatæ.

Semina oblongo-reniformia, pallide flava, subpellucida.

Fig. 1. Lacinia sorifera, subtus visa. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This species of *Polypodium* seems in North America to hold the same place that *P. Phegopteris* does with us; being apparently scattered over a very great extent of that country; and having so far an affinity with that species, that at first sight they might almost be mistaken for the same. Hence it is, perhaps, that Schkuhr in the place above quoted appears to have figured the American *P. hexagonopterum* as a variety of our European *P. Phegopteris*. A slight inspection of the sori, however, will at once show their distinguishing characters; for whereas in *P. Phegopteris* they are arranged in a single series close to the margin, in *P. hexagonopterum* they are scattered without order upon the lesser veins near to the midrib. Schkuhr, indeed, figures the sori in a single series, and Willdenow describes them as solitary; but such is not the case with perfect specimens of the plant:—a good representation of the plant we have therefore considered a desideratum.

Trichomanes intramarginale.

Pl. Javanic. del. *Sowerby sc.*

TRICHOMANES INTRAMARGINALE.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *TRICHOMANES*, Sm., Sw. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *intramarginale*; pumilum, frondibus erectis subbipinnatifidis, laciniis paucis lato-linearibus erecto-patentibus subundulatis opacis costatis nervo tenui paulo intra marginem sito apicibus retusis, involucris in apicibus laciniarum terminalium cylindraceo-campanulatis, ore patente brevissime bilabiato.

Hab. Insula Zeylonæ. Communicavit *Prof. Lindley*.

Caudex filiformis, repens, tomentoso-radiculosus.

Stipites perbreves, vix semiunciam longi, subtomentosi, superne alati.

Frons unciam longa, erecta, rigidiuscula, subbipinnatifida; *laciniæ* paucæ, lato-lineares, vel lineari-oblongæ, plerumque retusæ, minute reticulatæ, obscure virides, costatæ, nervo tenui paulo intra marginem sito.

Involucra oblongo-campanulata, ad apices laciniarum supremarum omnino immersa, ore paululum dilatato, brevissime bilabiato, integerrimo.

Receptaculum ———.

Capsulæ inclusæ, subglobosæ, compressæ, peltatæ, annulatæ.

Semina subglobosa, flavo-viridia, subpellucida, limbo pallidiora.

Fig. 1. Portio frondis cum involucris. f. 2. Involucrum verticaliter sectum, cum capsulis et basi receptaculi. f. 3. Portio laciniæ. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

Of this little plant, which appears to us very distinct from any hitherto described *Trichomanes*, we have only seen specimens in the state here represented, and in which the greater part of the receptacle is broken away. It is of a singularly lurid aspect, and very opake.

TAB CCXII.

Lycopodium nummulariifolium

D.r Greville delt

Swan Sc.

TAB. CCXII.

LYCOPODIUM NUMMULARIFOLIUM.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* bi-trivalves, corpusculis 1—6 globosis. *Br.*

Lycopodium *nummularifolium;* caule elongato pendulo dichotomo, foliis sessilibus oppositis rotundato-ovalibus quadrifariam imbricatis, spicis bifidis dichotomisque. *Bl.*

Lycopodium nummularifolium. *Blume Enum. Pl. Jav. fasc. 2. p. 263. Grev. & Hook. in Bot. Misc. v. 2. p. 374.*

Lycopodium rotundifolium (*Herb. Roxb.*) *Wall. in Cat. of Pl. in E. I. C. Mus. No.* 2183.

Hab. In India Orientali. *Roxburgh.* In Javæ montosis ex arboribus pendulum. *Blume.*

Caulis bipedalis et ultra, pendulus, flexuosus, filiformis, glaber, bis terve dichotome divisus, ubique foliosus.

Folia 4-fariam inserta, subdisticha, erecto-appressa, opposita, rotundato-ovalia, integerrima, subcoriacea, nitida, obscure enervia, tenuissime marginata, basi paululum attenuata, sessilia, versus apicem ramorum sensim minora.

Spicæ terminales, sessiles, filiformes, furcatæ, vel bis dichotomæ.

Squamæ remotiusculæ, oppositæ, 4-fariam insertæ, cordatæ, acutæ, siccitate rugosæ, basi connatæ, superiores abortivæ.

Capsulæ reniformi-globosæ, compressæ, flavæ, profunde bivalves, squamæ magnitudine.

Semina quaterna, minuta, flava, oblongo-subtriangularia, dorso convexa.

Tab. CCXII. Fig. 1. Folium. f. 2. Spicæ pars. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

This very distinct species of *Lycopodium*—evidently belonging to the *Phlegmaria* tribe—is only known to us from the specimen existing in Dr. Roxburgh's Herbarium, in the charge of our valued friend Dr. Wallich. It there bears the manuscript name of *L. rotundifolium,* a name we should gladly have adopted, were the plant not already published in the excellent "*Enumeratio Filicum,*" above quoted, of Dr. Blume, who found it upon trees in mountainous situations in Java.

It is to be regretted that no station is given with Dr. Roxburgh's specimen; nor can we tell from what part of India it was procured.

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Aloe plicatilis aspera

Alsophila aspera

TAB. CCXV.

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Alsophila aspera

Dr Greville delt

Swan Sc.

ALSOPHILA ASPERA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ALSOPHILA*, Br. *Sori* globosi, sparsi, receptaculo elevato e divisione venæ orto inserti. *Indusia* infra sorum inserta, lacero-multifida, quandoque obsoleta.

Alsophila *aspera* (Br.); caudice arborescente cicatricato superne frondoso, stipitibus muricatis, frondibus ovatis bipinnatis, pinnulis oblongo-lanceolatis acuminatis coriaceis glabris brevissime petiolatis profunde pinnatifidis basi truncatis, laciniis oblongis obtusis marginibus recurvis integerrimis.

Cyathea aspera. *Swartz, Syn. Fil. p.* 139? *Willd. Sp. Pl. v.* 5. *p.* 496? *Kaulf. Enum. Fil. p.* 260?

Polypodium asperum. *Linn. Sp. Pl. p.* 1555?

Filix arborescens spinosa, pinnulis in summitate serratis. *Plum. Fil. p.* 4. *t.* 3?

Hab. Insula Jamaicæ. *Gul. Bancroft, M.D.*

Caudex 20—25-pedalis, erectus, simplex, teres, 3—4 uncias latus, cicatricatus; cicatricibus magnis, ovato-acuminatis, vasibus tubulosis quasi punctatis; inferne nudiusculus, superne squamosus, frondosus; *frondibus* patentibus, numerosis.

Stipes bipedalis et ultra, digitis crassitie, teres, glaber, fuscus, facie anteriore profunde sulcatus, dorso præcipue spinis brevibus sparsis muricatus.

Frondes circumscriptione ovatæ, subattenuatæ, bipinnatæ; *pinnis primariis* ovalibus; *secundariis* seu *pinnulis* digitem longis, oblongo-lanceolatis, attenuatis, subcoriaceis, basi truncatis, brevissime petiolatis, profunde pinnatifidis, nunc, in parte inferiore, pinnatis; segmentis oblongo-ovalibus, obtusis paululum falcatis; marginibus plerumque recurvatis, integerrimis vel crenato-serratis, ad apicem usque floriferis. *Rachides primariæ* et *secundariæ* nervique supra appresso-pubescentes, subtus glabræ, remote paleaceæ; *paleæ* bullatæ, laciniatæ, *primariæ* nunc aculeato-tuberculatæ, nunc omnino læves.

Sori in nervos laterales intra marginem et costam, globoso-hemisphærici.

Involucrum obsoletum, ut videtur, vix ullum; ad basin infra sorum squamam minutam in ambitu paululum lacerata peltatam invenimus.

Capsulæ densissime compactæ, globosæ, fuscæ, annulo lato fere completo cinctæ, stipitatæ, receptaculo communi hæmisphærico insertæ.

Semina triangularia, pellucida, flavo-viridia.

Tab. CCXIII. Fig. 1. Caudicis portio, cum basibus stipitum; et f. 2. Stipes:—*magn. auct.* f. 3. Squama. f. 4. Squamæ supremæ portio:—*magn. auct.* f. 5. Cicatrix a parte inferiore caudicis.

Tab. CCXIV. Fig. 1. Frons $\frac{1}{5}$ *magn. nat.*

Tab. CCXV. Fig. 1. Pinna primaria; et f. 2. Pinnula:—*magn. nat.* f. 3. Pinnulæ lacinia cum soris. f. 4. Squama seu palea. f. 5. Receptaculum cum capsulis. f. 6. Capsula. f. 7. Semina:—*magn. auct.*

It has long been our wish to give figures and descriptions of the *arborescent Ferns;* but the difficulty of procuring perfect specimens of the caudex and fronds has hitherto prevented us. Dr. Bancroft has obligingly communicated some from Jamaica, and among them the present one. But though apparently a very common species in that island, and, from its size and beauty, forming a remarkable feature in the landscape; and though we have received portions of the fronds of what we consider to be the same species from other of the West Indian islands and from the continent of South America, we cannot satisfactorily refer it to any described species. Still, believing that the *Tree-Ferns* may be liable to much variation in their native soil, we have joined it, though doubtfully, to the *Cyathea aspera* of Swartz and Willdenow,—the *Alsophila aspera* of Mr. Brown. The original authority for that plant seems to be *Filix arborescens* &c. of Plumier, *Fil. t.* 3.; and there the primary and secondary rachides are densely prickly, which is by no means the case with

our plant; and the segments of the pinnules are described and figured as finely serrated; whereas in ours they are mostly entire. The specimens of *Cyathea muricata* W. in Sieber's Collection (*No.* 337.), referred to by Kaulfuss likewise as that plant (*Enum. Fil. p.* 259.), have a great resemblance in the fronds to ours, but they are more distinctly crenato-serrate; and the caudex is described by Plumier as being only about two feet high. Yet, again, if we look to the specific character given by Willdenow of the two above-mentioned species, we shall find that they differ only in one word; for, whereas in the one (*C. aspera*) the segments of the pinnules are said to be "*serrated at the apex*," they are in *C. muricata* stated to be "*crenate*." In the fronds of the two, as figured by Plumier (Tab. 3 & 4.), a very great similarity may be observed. Kaulfuss has taken up the two species, and, as it appears to us, has made the main difference to depend on the segments of the pinnule in *C. muricata* being soriferous only in the lower half; whereas in *C. aspera* the fructifications extend to the extremities. What that author means by the term "*receptaculo sphærico bivalvi*," which he introduces into the specific character of the latter, we do not know.

In regard to the genus, the involucre is, in our specimens at least, obsolete. The capsules form so compact a body, that they would appear to be held together by some indusium, however fugacious: yet in the earliest stages of the fructification which our plants will afford, we find no covering to the sori; but under the sorus, if that sorus be very carefully removed, we find a small peltate scale, greatly smaller than the sorus, jagged at the margin, and from which the receptacle of capsules appears to have originated, and which it may have covered in a very young state.

Polypodium nigrescens.

D.r Grenille del.t

Swan Sc.

TAB. CCXVI.

POLYPODIUM RIGESCENS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *POLYPODIUM*, Swartz. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium *rigescens*; frondibus linearibus pinnatifidis stipitatis glabris, laciniis oblongis obtusis integerrimis coriaceis, soris solitariis pilosis demum confluentibus. *Willd.*

Polypodium rigescens. *Bory*. *Willd. Sp. Pl. v.* 5. *p.* 183.

Hab. In arboribus montium insulæ Borboniæ. *Bory*.

Caudex ut videtur brevis, repens, radiculosus, squamosus; *squamis* paleaceis, atro-fuscis.

Stipites vix bipollicares, erecti, semiteretes, glabri, basin versus paleaceo-squamosi.

Frondes digitales et ultra, erectæ, rigidæ, lineares, profunde pinnatifidæ. *Laciniæ* horizontales, alternæ, ovato-oblongæ, obtusæ, coriaceæ, integerrimæ, glabræ, fructiferæ, subtus parce pilosæ, siccitate marginibus revolutis. *Rachis* glabra, dorso sulcata, facie inferiore prominente atro-fusca.

Sori subrotundi, approximati, intra marginem et costam siti, demum confluentes, pilis immixti.

Capsulæ globosæ, annulo lato fere completo cinctæ, brevi-stipitatæ.

Semina angulato-globosa, pallide cinereo-viridescentia.

Fig. 1. Lacinia frondis fructifera a dorso visa. f. 2. Pili ex eadem lacinia. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Polypodium rigescens appears to be known only by the description of Willdenow in the *Species Plantarum*. We are indebted to M. Desvaux for an authentic specimen, which we have here figured and described.

Asplenium Macraei

Sm. Greville del.t

TAB. CCXVII.

ASPLENIUM MACRÆI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *Macræi*; fronde lanceolata bipinnata, pinnulis omnibus cuneatis integris vel emarginatis inferioribus majoribus 3—4-fidis, laciniis integris vel retusis, rachibus universalibus superne marginatis partialibus lato-alatis, soris plerisque solitariis.

Hab. Whoohahoo, Insulis Sandvicensibus. *Macrae.*

Stipes tripollicaris, erectus, glaber, nitidiusculus, hinc sulcatus.

Frons spithamæa, circumscriptione lato-lanceolata, bipinnata; *pinnis* plerisque alternis, omnibus horizontalibus, inferioribus circumscriptione cordato-ovatis, reliquis ovato-lanceolatis, subpetiolatis, sesquiunciam ad duas uncias longis; *pinnulis* cuneatis, subsemiunciam longis, tenui-membranaceis, glabris, costatis, integerrimis vel emarginatis, superioribus sensim minoribus angustioribusque, omnino integerrimis, inferioribus majoribus, lato-cuneatis, tri-quinquefidis, segmentis obtusis vel retusis. *Rachis primaria* superne anguste marginata; *secundaria* lato-alata.

Sori oblongi, in pinnulis superioribus solitarii, inferioribus plerumque tres.

Involucrum oblongum, membranaceum, nunc paululum incurvatum.

Capsulæ globosæ, annulo lato cinctæ, longe pedicellatæ.

Semina subglobosa, intense fusca, sublimbata.

Fig. 1. Portio frondis fertilis. f. 2. Pinnula inferior. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

On the first aspect of this plant, it certainly bears a very considerable resemblance to the *Cænopteris rhizophylla*, figured at Tab. 193 of this work; and it is not easy in words to describe the essential differences. When they are minutely compared, however, it will be found that our present plant is of a much more delicate and membranaceous texture; that the pinnules are much broader and more cuneate; and that the fructifications are more distant from the margin, and hence possessing less of that character which has been considered to constitute the genus *Cænopteris* of Bergius, *Daræa* of Jussieu.

Trichomanes radicans.

Dr Greville del.

Swan Sc.

TAB. CCXVIII.

TRICHOMANES RADICANS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *radicans;* caudice longissime repente, frondibus numerosis subsessilibus flaccidis procumbentibus (costis radicantibus) ovato-oblongis bi-subtripinnatifidis, laciniis lineari-oblongis obtusis, involucris exsertis cylindraceis ore brevi patente brevissime bilabiato.

Trichomanes radicans. *Swartz, Fl. Ind. Occ. v.* 3. *p.* 1736. *Syn. Fil. p.* 143. *Willd. Sp. Pl. v.* 5. *p.* 513. *Kaulf. Enum. Fil. p.* 267. *Spreng. Syst. Veget. v.* 4. *p.* 180.

Trichomanes diaphanum. *Kunth et Humb. Nov. Gen. v.* 1. *p.* 21. (fide Sprengel).

Hab. In montibus altis Jamaicæ, ad arborum radices. *Swartz; Dr. Bancroft.* Insula Trinitatis. *Lockhart.* Insula Sancti Vincentii. *L. Guilding.* Brasilia. *Chamisso.* In umbrosis temperatis provinciæ Venezuelæ. *Humboldt.*

Caudex longissimus, repens, crassitie pennæ passerinæ, superne nudus, inferne radiculosus.

Frondes subsessiles, spithamææ fere ad pedalem, copiosæ, alternæ, circumscriptione oblongæ seu oblongo-ovatæ, bi-tripinnatifidæ, flaccidæ, procumbentes; *rachi* seu *costa* primaria sæpissime radicante; *radicibus* fibrosis brevissimis; *segmentis primariis* oblongis, basi paululum latioribus, horizontaliter patentibus, tenui-membranaceis, reticulatis, diaphanis, costatis nervosisque; *laciniis* brevibus, lineari-oblongis, integris vel patenti-bifidis, obtusis. *Stipes* perbrevis, lineam seu sesquilineam longus, alatus.

Involucra ad apices laciniarum, exserta, cylindracea, ore dilatato, membranaceo, sub-bilabiato, labiis brevissimis demum patentibus.

Receptaculum exsertum, involucro duplo longius.

Capsulæ inclusæ, peltatæ, orbiculares, compressæ, annulo lato cinctæ.

Semina subglobosa, pallide fusco-flavescentia, nunc obscure reticulata, et sublimbata.

Fig. 1. Segmentum frondis fertilis. f. 2. Involucrum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

We have already had occasion to remark, that some of the older species of Ferns stand as much in need of illustration as those that have recently been discovered. Such is eminently the case with the present individual, which, though described by Swartz, and taken up by many succeeding botanists, has never yet been figured, nor does it appear to have been correctly described. We can hardly believe but that our plant is the true *T. radicans* of Swartz; and it is indeed frequent in Jamaica and other of the West Indian islands: but in all our numerous specimens, the fronds are universally upon so short a stipes, that at first sight they would naturally be called sessile: yet Swartz describes the *stipes* as from one to three inches in length: again he observes, that it is "*simillimum T. scandenti*" of Linnæus, and refers to the figures of Plumier *Fil. t.* 93, and Sloane *Jam. v.* 1. *t.* 58, as authorities for this latter plant; but surely no two species can well be more different; and if we are correct in what we judge to be the *T. scandens* of Swartz, the figures just quoted represent it in caricature; but as we do not feel sure about that species, we refrain at present from offering any remarks upon it. We shall be glad, however, to have it in our power to give an authentic figure of it.

T. radicans appears to us to be very different from every other species of the genus. It is characterised by its very long creeping main-stems or caudices, which climb for a great way upon the trunks of trees, and are as it were pinnated with numerous flaccid fronds, closely bi-tripinnatifid, the ultimate segments frequently forked, and their divisions considerably spreading. The texture is very pellucid; and Sprengel is probably correct in referring to it the *T. diaphanum* of Kunth.

Hymenophyllum valvatum

Dr Greville delt

Swan Sc.

TAB. CCXIX.

HYMENOPHYLLUM VALVATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *HYMENOPHYLLUM*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *valvatum*; fronde ovata vel oblongo-ovata bi-tripinnatifida, laciniis lato-linearibus furcatis obtusis undulatis marginibus costisque subtus piloso-hispidis, involucris terminalibus bivalvibus, valvis ovatis convexis hispido-ciliatis vel nudis.

Hab. In truncos arborum apud Esmeraldas, regno Peruviano; alt. 4000 ped. *Prof. Gul. Jameson.*

Caudex filiformis, repens, nudus; *radicibus* tomentosis.

Stipites bi-triunciales, teretes, glabri, nudi, atro-fusci.

Frons digitalis, erecta, circumscriptione ovata vel oblongo-ovata, bi-tripinnatifida; *segmentis primariis* late ovatis, membranaceis, reticulatis, approximatis, imbricatis; *laciniis* furcatis, lato-linearibus, obtusis, undulato-crispatis, integerrimis, marginibus costisque subtus sparsim piloso-hispidis.

Involucra terminalia, ad apices laciniarum supremarum pinnæ præcipue sita, ovata, paululum compressa, profunde bivalvia; *valvis* nunc hispido-ciliatis, nunc marginibus nudis.

Receptaculum tenue, inclusum.

Capsulæ orbiculares, compressæ, peltatæ, reticulatæ, annulo completo latissimo.

Semina subgloboso-angulata, pallide fusca, sub summa lente reticulata.

Fig. 1. Portio frondis cum involucris, subtus visa. f. 2. Involucrum valvis apertis. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

The nearest affinity with this is perhaps the *Hymenophyllum tortuosum*, Tab. 129. of this work; but there the margins of the fronds are serrated, and the involucre is totally different, being monophyllous, with two small lips at the extremity. The hairs at the margin and upon the involucres of our plant are not always persistent; for in one of the specimens sent to us by Professor W. Jameson, they are almost entirely wanting, whilst those of the midrib beneath are present.

Asplenium attenuatum.

Barille delt

Swan Sc.

TAB. CCXX.

ASPLENIUM ATTENUATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *attenuatum*; frondibus linearibus, basi pinnatifidis supra integerrimis, apice attenuata radicante. *Br.*

Asplenium attenuatum. *Br. Prodr. Fl. Nov. Holl. v.* 1. *p.* 50. *Spreng. Syst. Veget. v.* 4. *p.* 80.

Hab. Prope Port Jackson, in Nova Hollandia. *Brown; Fraser.*

Caudex repens, crassitie pennæ anserinæ, squamis nigris ubique tectus, radicosus.

Stipites digitales et ultra, erecti, nigro-fusci, rigidi, hinc sulcati, sparse squamosi.

Frondes spithamææ et ultra, plerumque erecti, lanceolatæ, longe attenuatæ, subcoriaceæ, atro-virides, basi oblique dichotome nervosæ, obtuse inciso-lobatæ, inferne pinnatifidæ, vel etiam pinnatæ; *lobis* vel *pinnis* late obcordatis inciso-crenatis basi decurrentibus, dorso parce squamosæ, squamis minutis atro-fuscis, basi pinnatifidis reticulatis. *Frondis apex* nonnunquam radicans et ad terram descendens.

Involucra sparsa, obliqua, linearia.

Sori lineares.

Capsulæ globosæ, sublonge stipitatæ.

Semina subglobosa, paululum angulata, atro-fusca.

Fig. 1. Squamulæ e fronde. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Kaulfuss, not observing that Mr. Brown had already described an *Asplenium* under the name of *attenuatum*, had given that appellation to a very different species from Brazil. The present plant is very unlike any that we are acquainted with, and remarkable in many of the specimens for the lower part of the frond being pinnated, the middle pinnatifid, and the extremity quite entire, much attenuated, and often rooting.

Acrostichum virens.

Greville delt

Sm

TAB. CCXXI.

ACROSTICHUM VIRENS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *virens;* frondibus pinnatis (pinnulis subnovem) oblongo-lanceolatis acuminatis membranaceo-coriaceis glabris parallelo-venosis obscure reticulatis cartilagineo-serratis basi oblique cuneatis petiolatis, fertilibus linearibus obtusis, stipite elongato subpaleaceo.

Acrostichum virens. *Wall. Cat. of Pl. in Mus. of E. I. C. No.* 1033.

Hab. Tovag in India Orientali (*Gul. Govan, M.D.*). *N. Wallich, M.D.*

Caudex oblique repens, crassus, dense paleaceo-squamosus, radices fibrosas tomentosas emittens.

Stipes pedalis et ultra, semiteres, erectus, sparse squamosus, superne nudus.

Frons late ovata, pinnata; pinnis subnovem, alternis, palmaribus et ultra, oblongo-lanceolatis, membranaceo-coriaceis, glabris, nitidis, pallide virentibus, costatis, pennatim nervosis cum venis anastomosantibus; venulis nonnunquam liberis clavatis; apice attenuatis, marginibus undulatis, paululum incrassatis, remote cartilagineo-serratis, serraturis incurvis, basi oblique cuneatis, in petiolum brevem decurrentibus. *Rachis* glabra, nuda, antice sulcata.

Frons fertilis sterili longior; pinnis brevioribus, linearibus, ad apicem solummodo serratis, obtusis.

Capsulæ totam partem inferiorem pinnæ tegentes, globosæ, annulatæ; annulo fere completo; sublongum pedicellatæ.

Semina subgloboso-angulata, obscure reticulata.

Fig. 1. Portio pinnæ sterilis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Among the described species of *Acrostichum,* the one most nearly allied to this is the *Acrost. scandens* of Raddi (*A. serratifolium* of Mertens in Sprengel's *Syst. Veg.*); and if we were to consult only the specific character given of that plant, the two could scarcely be considered distinct. But in *A. scandens* the plant is smaller, the frond more oblong, the pinnæ more numerous, twenty or more, the serratures much coarser, more attenuated at the base, less so at the extremity; and there is likewise a considerable difference in the venation: for whereas in one plant the veins are copiously reticulated towards the margin and between the principal veins, the lesser ones often free with club-shaped extremities,—in *T. scandens* all the veins anastomose, except at the margin, where they are free, and terminate in clavate extremities: the pinnules, too, of the fertile frond are both shorter and broader.

In Dr. Wallich's collection is a species much more nearly allied to it; this is the *A. costatum* of the Catalogue, No. 26, but it is twice the size of the present species: the fronds are more coriaceous, the margins more thickened, not waved and crisped, and destitute of serratures. The colour is also very different, being of a purple hue.

Polypodium gracile.

Dr Greville delt

Swan

TAB. CCXXII.

POLYPODIUM GRACILE.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *PTERIS*, Linn. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium *gracile*; glabriusculum, frondibus linearibus pinnatis, pinnis lineari-oblongis sinuato-pinnatifidis subdecurrentibus, soris biserialibus demum confluentibus, stipite rachique gracillimis.

Hab. Huaylluay, prope Pasco, in Andibus Peruvianis. *Dom. Cruckshanks.*

Caudex ut videtur brevis, crassitie pennæ anserinæ, horizontalis, dense paleaceo-squamosus, inferne radicans; radicibus fibrosis, ramosis, tomentosis.

Stipites duas vel tres uncias longi, filiformes, graciles, atro-fusci, plurimi ut videtur ex eodem puncto caudicis, et ita subcæspitosi.

Frons spithamæa et ultra, linearis, pinnata. *Rachis* gracillima, flexuosa, glabra, vel ferrugineo-subpubescens. *Pinnæ* semiunciam ad unciam longæ, erecto-patentes, oblongæ vel lineari-oblongæ, alternæ, subcoriaceæ, pinnatifidæ, obtusæ, inferne paulum decurrentes, dorso subconvexo, glabro, nitidiusculo.

Sori sub singulas lacinias pinnarum solitarii, seriatim dispositi, subrotundi, convexi.

Capsulæ numerosæ, globosæ, lato-annulatæ, sublonge pedicellatæ.

Semina subglobosa, limbo hyalino, intus quasi e duabus vel tribus granulis composita.

Fig. 1. Portio frondis fertilis. f. 2. Capsulæ. f. 3. Semina.

This is one of the many interesting plants with which we have been favoured by Mr. Cruckshanks from the vicinity of Pasco in the Cordilleras of Peru, at an elevation of about 16,000 feet above the level of the sea. In its form it is slender and graceful, and it is very different from any other of the genus.

Polypodium Peruvianum.

Dr. Greville del.

Swan

TAB. CCXXIII.

POLYPODIUM PERUVIANUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *PTERIS,* Linn. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium *Peruvianum;* frondibus lineari-acuminatis profunde pinnatifidis inferne pinnatis rachi venisque hirsutis, laciniis ovatis obtusis integerrimis inferne decurrentibus 1—4-soris, stipite elongato ferrugineo-hirsuto pilis patentibus.

Polypodium Peruvianum. *Desv. Prod. Fil. in Ann. Soc. Linn. Par. v.* 6. *p.* 231.

Polypodium stipitatum. *Hook. et Grev. in MSS. Bot. Misc. v.* 2. *p.* 239.

Hab. Apud Huaylluay, prope Pasco, in Andibus Peruvianis. *Dom. Cruckshanks.*

Caudex repens, crassitie pennæ passerinæ, ramosus, densissime paleaceo-squamosus, superne frondosus.

Stipites duas vel tres uncias longi, subfiliformes, erecti, flexuosi, teretes, intense fusci, hirsuti, pilis longis patentibus ferrugineis.

Frons digitalis, erecta, linearis, basi apiceque attenuata, profunde pinnatifida, inferne fere pinnata, subcoriacea. *Rachis* atro-fusca, supra glabra, subtus sparsim hirsuta. *Laciniæ* alternæ, raro subopositæ, 3—4 lineas longæ, erecto-patentes, subcoriaceæ, ovatæ, obtusæ, margine inferne decurrente, integerrimæ, supra convexæ, glaberrimæ, subtus in nervo, et intra capsulas præcipue, sparsim ferrugineo-piloso, nervo valde obscuro.

Sori solitarii, vel 3—4 in eadem lacinia, prope nervum siti, majusculi, demum confluentes.

Capsulæ globosæ, annulo fere completo cinctæ, pedicellatæ, pedicello tenui.

Semina globosa, limbo subpellucido.

Fig. 1. Portio frondis cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

On our first investigation of this species, we were disposed to consider it an undescribed one; but upon comparing it carefully with the character of the *P. Peruvianum* of Desvaux in the work above quoted, we believe it to be the same; for that author has correctly pointed out the marks by which it is distinguished from *P. trichomanoides,*—namely, its elongated stipes clothed with long spreading hairs. M. Desvaux, however, has omitted to notice the long spreading hairs on the underside of the frond; and instead of the fronds being cæspitose, they decidedly arise from a long creeping caudex.

TAB. CCXXIV.

Lycopodium crassum

Graville del.

Swan Sc.

TAB. CCXXIV.

LYCOPODIUM CRASSUM.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* 2-valves, farina repletæ; *aliæ* 2—3-valves, corpusculis 6 globosis. *Br.*

Lycopodium *crassum;* caule procumbente radicante, ramis erectis cylindraceis crassis simplicibus vel dichotome divisis, foliis multifariam imbricatis erectis subspiraliter inclinatis lineari-lanceolatis acuminatis rigidis compressis obscure crenulatis, capsulis axillaribus solitariis.

Lycopodium crassum. *Humb. et Kunth Nov. Gen. v.* 1. *p.* 33. *Willd. Sp. Pl. v.* 5. *p.* 50. *Spreng. Syst. Veget. v.* 4. *p.* 21. *Hook. in Bot. Misc. v.* 2. *p.* 238.

Lycopodium elongatum. *Swartz Syn. Fil. p.* 175.

Hab. Crescit in declivitate montis ignivomi Antisana, prope Chussulongo, alt. 2218 hexap. (Regno Quitensi). *Humboldt.* Huaylluay, prope Pasco, in Andibus Peruvianis. *Dom. Cruckshanks.*

Caulis repens, crassiusculus, foliosus; *ramis* erectis spithamæis ad pedalem, basi, nunc etiam ad apicem, dichotome divisis una cum foliis cylindraceis, crassis. *Folia* numerosa, arctissime imbricata, undique inserta, erecta, seu subspiraliter inclinata, lineari-lanceolata, sensim acuminata, coriacea, nitida, glaberrima; dorso convexo, vix costato; intus plana, sub lente minute lepidota, marginibus pallidis fere cartilagineis, obscure crenulatis.

Color in nostris exemplaribus flavo-viridis.

Capsulæ reniformes, flavæ, axillares, bivalves, granulis minutis flavis e tribus corpusculis angulatis compositis repletæ.

Fig. 1. Folium a dorso visum. f. 2. Folium cum capsula. f. 3. Semina:—*magn. auct.*

This very fine species of *Lycopodium* belongs to the same group with *L. Selago;* and its nearest affinity is stated by Kunth and Willdenow to be *L. Saururus,* a plant with which we are unacquainted, but of which the figure given in Bory's Voyage almost exactly resembles our plant. It is described, however, as having the leaves in eight rows: in our plant the leaves are curiously spirally twisted, of a delicate pale green colour, not "*rubicundo-viridia,*" as stated by Willdenow and Kunth.

2

3

1

Blechnum Finlaysonianum.

D.r Greville delt.

Swan Sc.

TAB. CCXXV.

BLECHNUM FINLAYSONIANUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *BLECHNUM*, Linn. *Sori* lineares, continui, gemini, utrinque ad costam. *Indusia* membranacea, plana, versus costam dehiscentia.

Blechnum *Finlaysonianum*; frondibus pinnatis, pinnis lineari-oblongis integerrimis apice breviter et tenuiter attenuatis, basi superne oblique cuneatis inferne decurrentibus.

Blechnum Finlaysonianum. *Wall. Cat. of Pl. in Mus. of E. I. C. No.* 2172.

Hab. In Insula Penang? ("Herb. Finlayson.") *N. Wallich, M.D.*

*Caudex stipes*que nobis ignoti.

Frons bi-tripedalis et ultra, pinnata; pinnis alternis, remotis, coriaceis, subpedalibus, rectis, lineari-oblongis, fere ligulatis, diametro uncialibus vel sesquiuncialibus, integerrimis, submarginatis, superne paululum dilatatis, apicibus brevi- et tenui-attenuatis, basi superne oblique cuneatis, inferne insigniter decurrentibus; nervis numerosis, parallelis, simplicibus, oblique horizontalibus.

Sori lineares, a basi fere ad apicem continui, costæ approximati.

Involucrum membranaceum, continuum, margine integerrimum, intus dehiscens.

Capsulæ numerosissimæ, subglobosæ, annulo fere completo cinctæ, longe pedicellatæ.

Semina ovali-subglobosa, angulata, sublimbata, obscure reticulata.

Fig. 1. Portio pinnæ fertilis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

We have seen only one specimen of this very fine species of *Blechnum*, and that was destitute of stipes and caudex; but what remains of the frond is amply sufficient for us to determine that it belongs to no described species of the genus. It will, however, rank near to the *B. orientale*; but there the pinnæ are vastly more numerous and crowded, scarcely any of them decurrent at the base, and their form is linear-lanceolate, gradually and almost from the base attenuated into a long point.

Lindsæa divergens

Dr. Greville del.

Swan

TAB. CCXXVI.

LINDSÆA DIVERGENS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *LINDSÆA,* Dryander. *Sori* lineares, margine paralleli sæpiusque approximati. *Involucrum* ex apicibus venarum (una plurium) ortum ducens, exterius liberum. *Br.*

Lindsæa *divergens;* fronde lanceolata pinnata, pinnis approximatis horizontalibus obtusis glabris semihastatis obscure venosis, soris continuis, rachide stipiteque aterrimis nitidis glabris.

Vittaria divergens ("*Herb. Roxb.*"). *Wall. in Cat. of Pl. in Mus. of E. I. C. No.* 2191.

Hab. In India Orientali ("Herb. Roxb."). *N. Wallich, M.D.*

Stipes erectus, digitalis et ultra, tereti-angulatus, aterrimus, nitidissimus, glaber.

Frons subpedalis, circumscriptione lanceolata, pinnata; pinnis approximatis, unciam longis, semihastatis, obtusis; lobo superiore acuto, basi inferiore rotundato; subcoriacea, glabra, sub lente minutissime pellucido-punctata, costata, costa tenui flexuosa venisque lateralibus furcatis paulo intra marginem terminantibus. *Rachis* aterrima nitida, dorso tereti, facie superna plana, submarginata.

Sorus continuus, marginalis.

Capsulæ globosæ, annulatæ, longe pedicellatæ.

Semina subglobosa, fusca.

Fig. 1. Pinna fertilis. f. 2. Portio involucri, cum capsulis. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

The genus *Lindsæa* of Dryander presents some discrepancies in its fructification, which have induced succeeding authors to divide it into different genera. Among these, is the *Schizoloma* of Gaudichaud, distinguished by having the involucres double; that is to say, the margin of the frond apparently forms a portion of the involucre, and corresponds with the involucre itself; whereas in most of the true *Lindsææ* the involucre is superficial, and placed at a distance from the margin. This character is often accompanied with a difference in habit; in *Schizoloma* the costa occupying the centre of the pinna, and the sorus being continued all round the margin. To this group or genus our plant evidently belongs, together with the *Lindsæa lanceolata* of Mr. Brown, *L. ensifolia* of this work, *Schizoloma cordatum* of Gaudichaud, and *S. Guerinianum* Gaud. To this latter,—a native of the Molucca Islands,—the present species has a very great affinity; but it differs in its narrower and less oblique pinnæ, in the nerves, which branch off from a central though slender costa, and are only once forked a little below their extremities; whereas in *S. Guerinianum* there is a uniform reticulation: nor is the deep glossy and black colour of the stipes and rachis, which constitutes so remarkable a feature in our plant, at all noticed.

Perhaps this group will scarcely be held distinct from *Lindsæa,* when it is considered that in *L. cultrata* of this work (Tab. 144.) the involucre is as truly formed of a double involucre as in *Schizoloma;* notwithstanding which, the excentric costa, and the fructifications confined to the upper margin of the pinna, are characteristic of the true *Lindsææ.*

The slender costa and the nerves branching from it in our plant are not visible, unless the specimen be held between the eye and the light; and then, in the dried state at least, the whole of the pinnæ appear marked with small pellucid dots, arising from the reticulations.

Lycopodium diaphanum.

D. Gerrith. del.

Swan Sc.

TAB. CCXXVII.

LYCOPODIUM DIAPHANUM.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* 2-valves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

Lycopodium *diaphanum;* caule longissime repente, ramis erectis dichotome divisis, foliis undique imbricatis lineari-lanceolatis in acumen longum diaphanum serratum piliforme attenuatis, spicis cylindraceis ramos attenuatos terminantibus nunc bipartitis, squamis cordatis lacerato-serrulatis longissime acuminatis.

Lycopodium diaphanum. *Swartz, Syn. Fil. p.* 179. *Willd. Sp. Pl. v.* 5. *p.* 123. *Carm. in Linn. Trans. v.* 12. *p.* 509. *Spreng. Syst. Veget. v.* 4. *p.* 15.

Lycopodium clavatum? *Pet. Th. Fl. Trist. d'Acunh. in Mel. de Bot. p.* 30. (*Carmichael*).

Hab. In Insula Tristan d'Acunha. *Petit Thouars; Carmichael.*

Caules bi-tripedales et ultra, cylindracei, repentes, flexuosi, subpinnatim ramosi, inferne radices fibrosas longas crassas pallide fuscas emittentes. *Rami* erecti, palmares ad spithamæos, bis terve dichotome divisi, una cum ramis cylindracei, crassi, hic illic constricti, ubique dense foliosi.

Folia linearia vel lineari-lanceolata, erecto-incurvata, subcoriacea, in acumen longum diaphanum serrulatum attenuata, plana, nervo obscure carinato.

Spicæ cylindraceo-incrassatæ, biunciales, erectæ, ramos attenuatos terminantes, et ita subpedunculatæ, plerumque simplices, nonnunquam fere ad basin dichotomæ.

Squamæ membranaceæ, serrulatæ, sublaceratæ, e basi cordata, lata, sensim in acumen longum subdiaphanum attenuatæ, erecto-patentes, demum reflexæ, flavo-fuscæ.

Capsulæ reniformes, flavæ.

Semina minutissima, pallida, pellucida, quaternata.

Fig. 1. Folia caulina. f. 2. Squama cum capsula. f. 3. Semina:—*magn. auct.*

Captain Carmichael observes that "this elegant plant grows indiscriminately on the dome, the face of the table-land, and the plain of Tristan d'Acunha. It extends to the length of several fathoms, decaying from the base in proportion as it advances, and deriving sustenance by the radicles, which it pushes from time to time into the soil. It is entirely clothed with leaves, ending in a white filament, which gives it in its fresh state a silky feel. The spikes are sessile, cylindrical, two inches long, simple, bifid, or in pairs, equal in thickness to the shoot, and of a yellowish colour. The floral leaves are reflected after the dispersion of the seeds."

Asplenium Grevillii

Dr. Greville delt.

Swan

TAB. CCXXVIII.

ASPLENIUM GREVILLII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *Grevillii*; cæspitosum, fronde simplice oblongo- seu ovato-lanceolata subsinuata tenui-acuminata inferne in stipitem longum usque ad basin alatam decurrente, soris transversalibus anguste linearibus numerosis parallelis.

Asplenium Grevillii. *Wall. in Cat. of Pl. in Mus. of E. I. C. No.* 1036.

Hab. Tovag, in India Orientali. *W. Govan, M.D.* (*N. Wallich, M.D.*)

Radix cæspitosa, fibrosa; fibris ramosis, ferrugineo-tomentosis.

Stipites plurimi ex eadem radice, erecti, digitales ad spithamæos, utrinque lato-alati; alis e marginibus decurrentibus frondis, inferne sensim angustioribus.

Frons palmaris ad spithamæam, nunc ovato-lanceolata, nunc oblongo-lanceolata, subcoriacea, pallide viridis, subundulata et margine paululum sinuata, integerrima, breviter sed tenui-acuminata, inferne usque ad basin stipitis insigniter decurrens, costata, parallelim nervosa, nervis approximatis, oblique horizontalibus, ad marginem fere attingentibus.

Sori unciam longi, transversim dispositi, numerosi, approximati, anguste lineares.

Involucrum longissimum, angustissimum, membranaceum, superne dehiscens.

Capsulæ globosæ, grosse reticulatæ, lato-annulatæ, longe stipitatæ.

Semina elliptica, marginata, reticulata, fusca.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

Among the numerous species of the genus *Asplenium*, there is not perhaps a more decidedly marked one than the present; for its stipes, which is longer than the frond, is almost entirely obliterated by the singularly decurrent margin of the latter, which, from a rather sudden contraction near the base, gradually runs down into two winged margins to the stipes, thus forming as it were a portion of the frond itself. The colour is a delicate pale green; the sori very numerous, and, originating from near the costa, they reach nearly to the margin in an uninterrupted line. The whole frond and stipes are entirely glabrous and destitute of chaffy scales.

Kaulfuss del.

Kaulfussia æsculifolia

Swan

KAULFUSSIA ÆSCULIFOLIA.

FILICES.—Marattiaceæ. *Kaulf.* Mesodmeæ. *Blume.*

Gen. Char. *KAULFUSSIA,* Blume. *Sori* orbiculares, sparsi. *Capsulæ* stellatim connatæ, superne longitudinaliter hiantes. *Indusium* nullum.

Kaulfussia *æsculifolia. Blume Enum. Pl. Jav. fasc.* 2. *p.* 260.

Aspidium æsculifolium. *Blume Enum. Pl. Jav. fasc.* 2. *p.* 143.

Polypodium angulatum. *Reinwardt in litt.*

Hab. In Javæ Provincia Bantam. *Reinwardt.*

Caudex . . . . . .

Stipes octopollicaris, crassitie pennæ anserinæ, atro-purpureus, striatus, tuberculis squamarum rudimentis crebris asper, subtus canaliculatus; intus celluloso-spongiosus (mucilaginosus?), vasis spiralibus, quæ scalaria vocant, in fasciculum collectis, nunc amplioribus nunc tenuioribus, omnibus conicis obtusis clausis, adhuc devolvendis percussus.

Frons ternata, ampla. *Foliola* oblongo-elliptica, inæqualia, acuminata, subrepanda, supra glabra, subtus vesiculis pertusis, nudo oculo quidem perspiciendis, sed facile pro paleis furfuraceis habendis, tecta, ad costam paleis minutissimis stellatis badiis adspersa, petiolata, costata, nervosa, obscure areolato-reticulata, coriacea: *petioli* semipollicares, tuberculato-squamosi, cæterum stipiti similes; in *costas* basi latas, subtus prominentes, squamulis lanceolatis brunneis corrugatis ornatas, apicem versus subevanescentes producti; *nervi* remoti, nunc subhorizontales nunc patentes, vel oppositi vel alterni, vix prominuli, marginem versus evanidi. *Folium terminale* decem-pollicare; *lateralia* geminata, sex- vel octo-pollicaria.

Sori per totam foliolorum paginam inferiorem magis sparsi, quam ordine terno vel quaterno venularum anastomosi inter nervos impositi, orbiculares, octo- vel novem-capsulares, centro adfixi, magnitudine seminum *Raphani*, facile avellandi, maculam vel pulvinulum relinquentes.

Capsulæ octo vel novem radiatim collocatæ, latere connatæ, spongiosæ, asperiusculæ, marcescentes, statu sicco corrugatæ, badiæ, superne per totam longitudinem hiantes.

Semina subglobosa, cretacea.

Fig. 1. Frons ab inferiori:—*naturali magn.* f. 2. Particula frondis cum quatuor soris reliquorumque vestigiis:—*ter aucta.* f. 3. Particula frondis fissa et luci obversa, quo rete cellulosum, venulæ anastomosantes et vesiculæ tres perforatæ in conspectum veniant:—*magis aucta.* f. 4. Squamula e fronde; et f. 5. una e costa desumta:—*perquam auctæ.* f. 6. Sorus a superiori, capsulis hiantibus. f. 7. Idem ab inferiori:—*eodem augmento.* f. 8. Semina:—*summo augmento.*

Specimen hujus plantæ debeo eximiæ liberalitati clarissimi detectoris, C. G. Reinwardtii, Professoris Lugdunensis. Plantam hic depictam a supra laudata Blumiana plane non differre statim quidem cognovi; attamen lubenter fateor, adfinitatem cum *Marsileaceis* et *Ophioglosseis*, a clarissimo *Floræ Javæ* editore declaratam, sententiam meam primum fere labefactasse. Haud male certe planta nostra *Marattiaceis*, quas primus proposui atque descripsi (1824.) posthac vero Boryo et Agardho alia voce (*Marattieæ* et *Danæaceæ*) insignire placuit, adsocianda. Frons ampla ternata cum *Danæa trifoliata* (Reichenbach *Plant. Guianens. exsiccat.*) convenit, itidem fructificationes sunt epiphyllæ, sori e capsulis inornatis cuneatis rima hiantibus connatis compositi (*Angiopteris, Marattia*). Sororum tantummodo situs sparsus in ordine nostro nondum observatus fuit. Ne vero videatur, me aliorum peritorum indicium de hac re occupare, meo autem nimium ponderis adferre voluisse, ipsa Blumii verba hic adjicere liceat.

"Mesodmeæ.

"*Capsulæ* oblongæ, nudæ, spongioso-coriaceæ, uniloculares, exannulatæ, a lateribus inter semet connatæ, circa receptaculum centrale soroideo-insertæ, frondis paginæ inferiori insidentes.

"*Obs.* Nova hæcce Filicum tribus, ab omnibus reliquis aliena, solummodo ad *Marsileaceas* et *Ophioglosseas* quodammodo accedit.

"*Kaulfussia æsculifolia.—Aspidium æsculifolium;* fronde ternata coriacea supra glabra subtus sparse furfuracea, foliolis subsessilibus elliptico-oblongis acuminatis subrepandis, medio longiori, lateralibus basi oblique attenuatis, uno alterove profunde bipartito aut geminato, soris subseriatis majusculis, stipite purpurascente aspero." *Blume.* (*Kaulfuss.*)

[We are indebted to Dr. Kaulfuss for the accompanying figure and for the above description of this most rare and interesting Fern: ere its publication could be accomplished, we have, with much regret, received the intelligence of the death of this able botanist. His "*Enumeratio Filicum*" justly entitles his name to rank with those of Swartz, Smith, Brown and Blume, who have laboured most successfully in advancing our knowledge of the Ferns.]

TAB. CCXIX.

Lavallia heterophylla.

Dr. Greville delt.

Swan Sc.

TAB. CCXXXI.

DAVALLIA ANGUSTATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *DAVALLIA*, Sm. *Sori* subrotundi (vel in lineola verticali) margini plerumque approximati. *Involucrum* superficiarium, ex apice venæ unicæ ortum, lateribus vel lata basi adnatum, exterius et verticaliter liberum. *Br.*

Davallia *angustata;* frondibus subuniformibus simplicibus lanceolatis acuminatis coriaceis crenato-dentatis, soris marginalibus, stipite compresso glabro, caudice repente squamoso.

Davallia angustata. *Wall. in Herb.* 1823. *Cat. of Pl. in Mus. of E. I. C. No.* 242.

Hab. In Insula "Singapore" dicta. *N. Wallich, M.D.*

Caudex repens, ramosus, crassitie pennæ corvinæ, densissime paleaceo-squamosus; squamis lanceolato-subulatis, erectis, fusco-ferrugineis.

Stipites pollicares, erecti, compressi, marginati, glabri, nudi.

Frons digitalis, lanceolata, coriacea, subnitida, dentato-crenata, costata, parallelim venosa; venis latiusculis furcatis: *fertilibus* paulo angustioribus, lineari-lanceolatis, marginibus magis dentatis, in sinubus dentium soriferis; soris solitariis.

Involucrum transversim ovale, lata basi affixum, membranaceum, planum.

Capsulæ obovato-globosæ stipite subduplo breviores.

Semina pallida, pellucida, subelliptica.

Fig. 1. Portio frondis fertilis, subtus visa. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

The present very interesting species of *Davallia* is one of the few possessing a simple frond, and is certainly most nearly allied to the *D. heterophylla* (Tab. 230.): but the caudex is shorter and thicker, clothed with much longer and differently shaped scales. The fertile and the sterile fronds differ very little in shape from each other; the margins are simply crenato-dentate, and in the sinus of each tooth is a sorus; so that these sori are arranged in a single line on each side at the margin of the frond. The texture is more rigid and coriaceous, the surface more glossy:—the nerves, diverging from the midrib, not so crowded, and very broad in proportion to their length.

Davallia angustata.

D.r Greville del.t

Swan Sc.

TAB. CCXXX.

DAVALLIA HETEROPHYLLA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd., Spreng.*

Gen. Char. *DAVALLIA*, Sm. *Sori* subrotundi (vel in lineola verticali), margini plerumque approximati. *Involucrum* superficiarium, ex apice venæ unicæ ortum, lateribus vel lata basi adnatum, exterius et verticaliter liberum. *Br.*

Davallia *heterophylla;* frondibus simplicibus ovato-lanceolatis breviter acuminatis, fertilibus lanceolatis sinuato-lobatis pinnatifidisque multifloris, stipite compresso glabro, caudice repente squamoso.

Davallia heterophylla. *Sm. in Act. Taur. v.* 5. *p.* 414. *Swartz, Syn. Fil. p.* 130. *et p.* 337. *Willd. Sp. Pl. v.* 5. *p.* 465. *Spreng. Syst. Veget. v.* 4. *p.* 118.

Davallia pinnatifida. *Swartz Syn. Fil. p.* 130.? *Willd. Sp. Pl. v.* 5. *p.* 465.? *Spreng. Syst. Veget. v.* 4. *p.* 118.?

Davallia lobulosa. *Wall. Cat. of Pl. in Mus. of E. I. C. No.* 241.

Humata Ophioglossa. "*Cav. Prel.* 1801. *No.* 678."

Humata pinnatifida. "*Cav. Prel.* 1801. *No.* 679."

Hab. In Nicobar, Sumatra, Insulis Marianis. "*Swartz.*" In Insula Penang, super arborum truncos rupibusque. *N. Wallich, M.D.* 1822.

Caudex longissime repens, pennæ passerinæ crassitie, ramosus, squamosus; squamis imbricatis, ovatis, acuminato-setaceis, rigidis, fuscis.

Stipites unciam vel sesquiunciam longi, erecti, compressi, glabri, nudi, superne marginati.

Frons digitalis, ovato-lanceolata, breviter acuminata, coriacea, integerrima, glabra, costata, parallelim nervosa; *nervis* approximatis, versus basin furcatis. *Fertiles* plerumque sterilibus longiores, multo angustiores, lanceolatæ seu lineari-lanceolatæ, sensim acuminatæ, inferne sinuato-lobatæ, superne pinnatifidæ; *laciniis* subrotundatis, lobisque angulato-dentatis, soriferis.

Sori dorso et in sinubus laciniarum et dentium.

Involucrum reniforme, membranaceum, puncto affixum, versus marginem laciniarum dehiscens.

Capsulæ globosæ, longe stipitatæ.

Semina elliptico-reniformia, reticulata, pellucida, pallida.

Fig. 1. Involucrum. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

We think Dr. Wallich will agree with us in referring this—the *D. lobulosa* of his valuable Catalogue—to the *D. heterophylla* of Smith and Swartz. Our specimens are indeed more pinnatifid than the description of the latter would allow; but we find that the fertile fronds vary in this respect, and sometimes so exactly correspond with the *Humata pinnatifida* of Cavanilles, that we are entirely disposed to consider them one species. On a specimen now before us, there is a fertile frond with the lower half sinuate and dentated, whilst the upper half is truly pinnatifid and dentated.

TAB. CCXXXII.

Polypodium Parkeri

Dr. Greville del.

Swan Sc.

TAB. CCXXXII.

POLYPODIUM PARKERI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Br.*

Gen. Char. *POLYPODIUM,* Linn. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium *Parkeri;* frondibus pinnatis pinnis lato-lineari-lanceolatis coriaceis nitidis glabris parallelo-venosis basi subinæquilaterali acutiusculo petiolatis brevi-acuminatis serratis versus apicem præcipue soris pilis innumerosis mixtis costam approximatis, sub-biserialibus sparsisque.

Trichopteris n. sp. *Parker, MSS.*

Hab. Prope flumen Mazaronie in Guiana. *Dom. Parker.*

Caudex . . . . . ?

Stipes . . . . . ?

Frons ampla, pinnata; *pinnis* subremotis, patentibus, spithamæis ad pedalem lato-lineari-lanceolatis, rigidis, tenui-coriaceis, nitidis, costatis; costa subtus valde prominente; pulcherrime horizontaliter parallelim venosis; venis approximatis simplicibus vel furcatis, ad marginem attingentibus; breviter subanguste attenuatis, serratis versus apicem præcipue; basi inæquilaterali; breviter petiolatis, glaberrimis. *Rachis* lævis, glabra, dorso semiteres, facie superne plana, subcanaliculata.

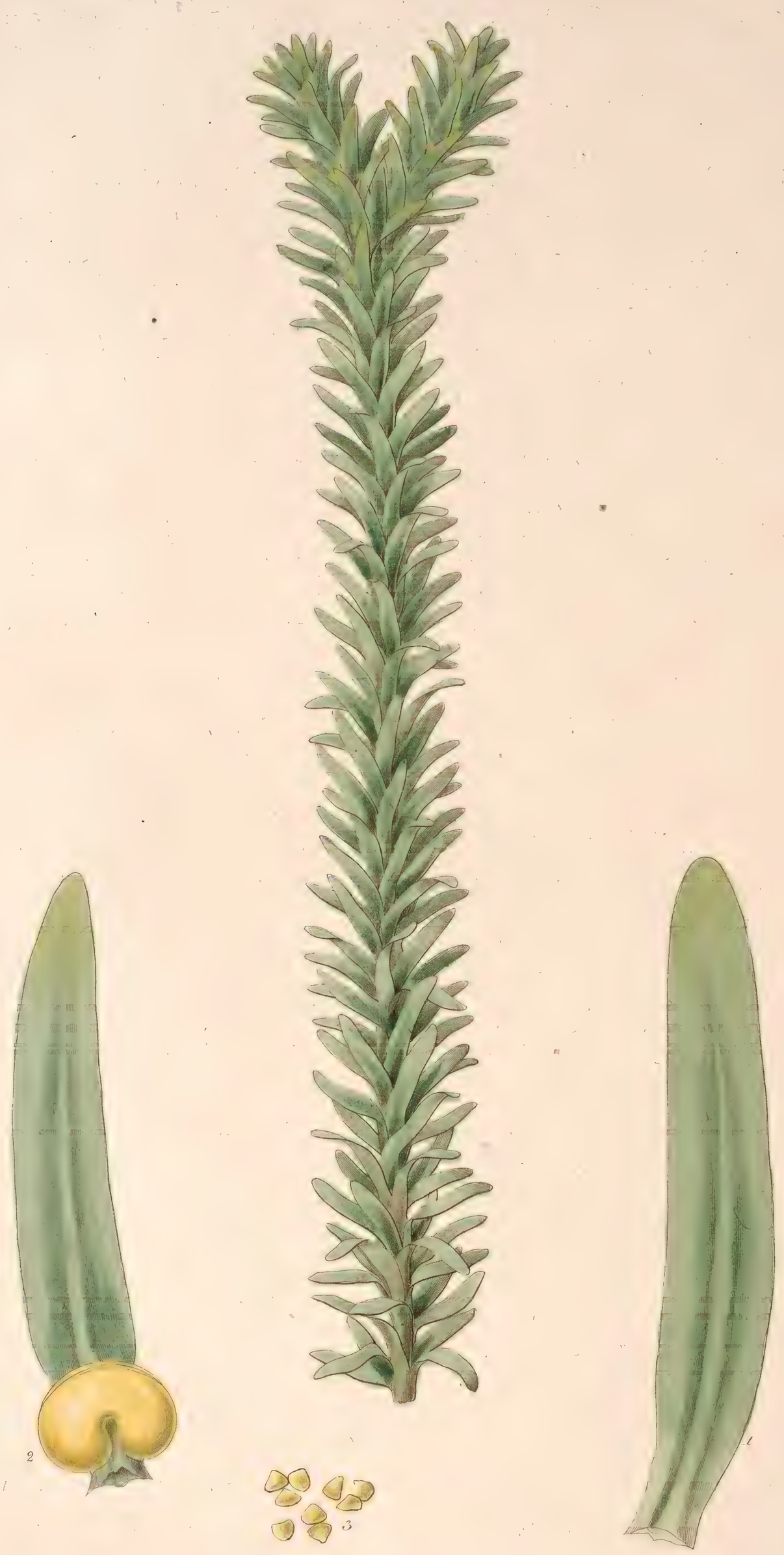
Sori lanosi, numerosi, semper costæ approximati, sub-biseriales sparsique, serie unica costæ contigua, altera magis interrupta, e costa remota.

Capsulæ 15—20 in singulo soro, pilis innumerosis compressis subclavatis duplo longioribus immixtæ, subrotundæ, brevi-pedicellatæ, grosse reticulatæ, annulo magno incompleto cinctæ.

Fig. 1. Portio frondis cum soris. f. 2. Sorus. f. 3. Capsulæ:—*magn. auct.*

Mr. Parker, to whom we are indebted for our knowledge of this splendid Fern, had rightly determined it to belong to the genus *Trichopteris* of Presl, and to be a new species. That genus however, depending for its character solely upon the hairs which are mixed with the capsules of the sori, can hardly be considered as really distinct from *Polypodium.* Since our figure of it was engraved, we have seen specimens which have the pinnæ nearly twice as large as those we have represented. The sori originate in two series near the lower part of the lateral veins; one series placed very near to the midrib, the other at some distance from it, and much more irregular in the disposition of its sori. Between these two series, and a little beyond the outer one, other sori are indiscriminately scattered.

In the *Trichopteris excelsa* of Presl (the *Polypodium Corcovadense* of Raddi, and the *P. Tænitis* of Roth), the sori are arranged in a single series, on each side, between the midrib and the margin.



Lycopodium aloifolium.

Dr. Greville delt. Swan Sc.

TAB. CCXXXIII.

LYCOPODIUM ALOIFOLIUM.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles: *aliæ* 2-valves, farina repletæ: *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

Lycopodium *aloifolium;* caule elongato flaccido subdichotomo, foliis ligulatis obtusis coriaceis patentibus subenerviis marginibus reflexis superne præcipue nitidis, capsulis axillaribus.

Lycopodium aloifolium. *Wall. Cat. of Pl. in Mus. of E. I. C. No.* 129.

Hab. Nulghary in India Orientali. *N. Wallich, M.D.*

Caulis elongatus, versum apicem, ut videtur, præcipue divisus, flaccidus, foliosus.

Folia undique imbricata, patentia, ligulata, obtusa, coriacea, plana, integerrima, dorso paululum carinato, nitidiusculo facie superne præcipue.

Capsulæ axillares, reniformes, sinu profundo bivalves; granulis seu seminibus angulatis ternatim congestis.

Fig. 1. Folium a dorso visum. f. 2. Folium cum capsula. f. 3. Semina:—*magn. auct.*

Of this plant we have only seen the fragment here represented; we can therefore say little of its ramification. Dr. Wallich justly compares it with the *L. obtusifolium* of his Catalogue (the *L. Hamiltonii* of Sprengel): but this is a slenderer plant, with narrow, ligulate or almost linear leaves, which are thicker and more coriaceous, and not furnished with an evident nerve.

Nephrodium elongatum

Swan Sc.

TAB. CCXXXIV.

NEPHRODIUM ELONGATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *NEPHRODIUM*, Br. *Sori* rotundi, dorsales. *Involucrum* reniforme, sinu affixum, marginibus liberis. *Br.*

Nephrodium *elongatum;* frondibus bipinnatis pinnulis superioribus subovatis, intermediis oblongis sublobatis, inferioribus elongatis subpinnatifidis, omnibus argute serratis glabris subtus minute crystallino-glandulosis subsquamosis, involucris convexis glandulosis, stipite inferne squamis grossis paleaceis.

Aspidium elongatum. *Swartz, Syn. Fil. p.* 55. *Willd. Sp. Pl. v.* 5. *p.* 269. *Spreng. Syst. Veget. v.* 4. *p.* 107.

Polypodium elongatum. *Ait. Hort. Kew. ed.* 1. *v.* 3. *p.* 465.

Tectaria elongata. "*Cav. Ann. de Hist. Nat. v.* 4. *p.* 101."?

Hab. In Madera. *Masson; Rev. R. T. Lowe.* Insulis Azoriis. *Masson.* "In Teneriffa" (*Willdenow*).

Stipes pedalis, erectus, firmus, flavescenti-fuscus, subangulatus, facie anteriore sulcatus, squamosus; squamis magnis, paleaceis, inferne densissime imbricatis, intense fuscis, nitidis, ovatis, valde acuminatis, unciam fere longis.

Frons bipedalis et ultra, bipinnata, circumscriptione ovata, acuminata, subcoriaceo-membranacea, læte viridis, glabra, subtus pallidior et minutissime glandulosa; glandulis crystallinis. *Pinnæ* horizontales; *inferiores* longiores, ovatæ, acuminatæ; *supremæ* sublineares: *pinnulæ* pinnarum *superiorum* brevissime confluentes, subovatæ; *intermediarum* oblongæ: *superiores* confluentes, *inferiores* liberæ, sublobatæ, versus basin præcipue: *inferiorum* elongatæ, oblongo-lanceolatæ, pinnatifidæ; omnibus obtusis argute serrulatis, sessilibus, costatis, nervosis. *Costa* subtus squamis subsolitariis fuscis rotundato-breviformibus tecta.

Sori rotundati, numerosi, in pinnulas biseriatim dispositi, costæ approximati.

Involucrum reniformi-rotundatum, valde convexum, minute glandulosum, pallide fuscum, sinu profundo.

Capsulæ numerosæ, fuscæ, pedicellatæ, annulo incompleto cinctæ.

Semina intense fusca, ovali-globosa, subangulata.

Fig. 1. Pinnula sterilis e parte superiore pinnæ, subtus visa. f. 2. Involucrum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This Fern appears to be very little known to botanists, and we are much indebted to the Rev. R. T. Lowe for sending us fine specimens gathered in Madeira, at Ribeiro d'Amestade, at an elevation of 3000 feet above the level of the sea, and from which our figure and description have been made. These, too, we have had an opportunity of comparing with an authentic specimen of Mr. Masson's, and thus determining it to be the *Polypodium elongatum* of the Hortus Kewensis. It is assuredly allied to *Nephrodium Filix Mas;* but its peduncles are more slender, more compound, more elongated, the underside is minutely dotted with crystalline glands, and the involucre, which is very convex, is also studded with glands, some crystalline, others opake.

TAB. CCXXXI

Acrostichum palaeaceum

Dr. Greville del.

Swan sc.

TAB. CCXXXV.

ACROSTICHUM VESTITUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam pagınam inferiorem frondis (interdum diversæ) ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *vestitum;* cæspitosum, frondibus oblongo-lanceolatis acutis membranaceo-coriaceis integerrimis, in stipitem brevem atro-squamosum attenuatis, utrinque margine costaque præcipue squamis appressis ciliatis obsitis, fertilibus lanceolatis, stipite elongato.

Acrostichum vestitum. *Lowe, MSS.*

Hab. In ripas petrosas apud "Ribeiro Frio" altid. 3000 ped. in Insula Maderæ. *Rev. R. T. Lowe.*

Radix fibrosa, fibris flexuosis, ramosis, nigris, fusco-pubescentibus.

Stipites cæspitosi, unciam ad duas uncias longi, squamis patentibus, ovatis, nigrescentibus, nitidis, longe ciliatis undique tecti.

Frondes spithamææ et ultra, unciam latæ, oblongo-lanceolatæ, membranaceo-coriaceæ, læte virides, costatæ, parallelim nervosæ, integerrimæ, apice acutæ, inferne attenuatæ, utrinque margine costaque præcipue squamis ovatis vel ovato-lanceolatis nonnunquam etiam subulatis pulcherrime ciliatis tectæ. *Squamæ* frondium juniorum ferrugineæ, demum pallidæ: in costam majores sunt sæpissime nigræ, in marginem magis ciliatæ ut videantur tomentosæ. *Frondes fertiles* reliquis angustiores, lanceolatæ, stipite duplo longiores.

Capsulæ totam paginam inferiorem occupantes, squamis immixtæ, subglobosæ, paululum compressæ, lato-annulatæ, sublonge pedicellatæ.

Semina subreniformi-globosa, intense fusca.

Fig. 1. Squama e stipite. f. 2. Squama e pagina superiore frondis. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Whether or not Swartz may have confounded two species under his *Acrostichum squamosum,*—the Madeira plant and that from Jamaica,—we cannot positively say: but certain it is, that, though agreeing in some respects with that species, it can hardly be considered the same; for he describes the fronds as one or two feet in height, and the stipes from three or four inches to a span long, and the scales of this latter as imbricated: whereas our fronds do not exceed a span in height, the stipes is unusually short for this group of *Acrosticha,* and the scales upon the stipes are remarkably patent. Willdenow does not seem to be well acquainted with Swartz's plant, for he quotes it under his *A. lepidotum* with a mark of doubt, and the character of that species is quite at variance with ours. We think it very likely that Swartz had confounded imperfect specimens of our plant from Madeira with an *Acrostichum* somewhat resembling it from Jamaica: and, as he himself observes, he was unacquainted with the fructified state of the plant.

This Fern is one of great beauty; for, numerous as are the scales upon every part of the plant, the delicate green hue of the frond is distinctly visible, and the varied colour of those scales gives a richness to the whole plant. Those of the older fronds, both on the upper and under surface, are pale-coloured and almost white; those of the younger fronds ferruginous: those of the stipes, and many also on the midrib, are larger than the rest, and glossy black, sometimes with the disk reddish. The plant itself Mr. Lowe appears to have detected only in one spot; and it was not till after a long-continued search that he was so fortunate as to find fructified specimens. We may add, that we have seen no Fern that can be confounded with it from any country.

Trichomanes punctatum

Dr. Greville del.

Swan Sc.

TAB. CCXXXVI.

TRICHOMANES PUNCTATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *punctatum*; frondibus appressis simplicibus cordato-rotundatis obovatisve brevissime petiolatis radiatim nervosis crenato-lobatis marginibus stellatim pilosis, involucris raris marginalibus subcylindraceis bilabiatis, receptaculo perbrevi.

Trichomanes punctatum. *Poir. in Enc. Méth. Bot. v.* 8. *p.* 64. *Kaulf. Enum. Fil. p.* 261. *Spreng. Syst. Veget. v.* 4. *p.* 128.

Hab. In India Occidentali: Insula Martinicæ. *Poiret.* Insula Guadaloupæ. *Kaulfuss.* Guiana. *Dom. Parker.*

Caudex sublonge repens, ramosus, crassitie fili emporetici, dense fusco-tomentosus.

Frondes numerosæ, semipollicares, appressæ, subimbricatæ, plerumque cordiformi- vel reniformi-rotundatæ, rarius obovatæ, membranaceæ, virides, minutissime reticulatæ, radiatim nervosæ; nervis repetitim dichotomis ad marginem usque attingentibus; crenato-lobatæ pilis raris nigro-fuscis stellatis sæpe deflexis ciliatæ, inferne nunc subtruncatæ, plerumque sinu profundo bilobatæ, raro subcuneatæ, in stipitem perbrevem attenuatæ.

Involucrum marginale, plerumque solitarium, fere omnino exsertum, subcylindraceum, superne latius bilabiatum; labiis demum patentibus subrotundatis.

Receptaculum vix exsertum.

Capsulæ orbiculares, peltatæ, reticulatæ, annulo completo cinctæ.

Semina minutissima, subglobosa, viridi-fusca.

Fig. 1. Portio caudicis cum frondibus. f. 2. Frons altera. f. 3. Portio frondis cum pilo stellato-deflexo. f. 4. Involucrum. f. 5. Portio receptaculi cum capsulis. f. 6. Semina:—*magn. auct.*

We must confess that neither the name nor the description given by Poiret of this plant in the *Encyclopédie Méthodique* would have led us to consider it the same as that which is here represented: we have, however, received specimens from Kaulfuss, which prove it to be the individual described by him under that appellation. Its nearest affinity is with the *T. reptans* (Tab. 32. of this work); from which it is distinguishable by its much smaller size, and rounder, imbricated and nearly sessile fronds, which are scarcely lobed at the margin, and never pinnatifid. The name *T. nummulariæfolium* would have been much more appropriate than that of *punctatum*.

Acrostichum Sieberi.

TAB. CCXXXVII.

ACROSTICHUM SIEBERI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *Sieberi;* fronde simplici oblongo-lanceolata obtusa integerrima glabra nitida coriaceo-rigida margine incrassato subrecurvo, inferne attenuata in stipitem fronde breviore subsetaceo-squamosa, fertili angustiore caudice basique stipitis squamis subulato-setaceis longissimis obsitis.

Acrostichum latifolium. *Sieb. Syn. Fil. No.* 26. (non Swartz).

Hab. In Insula Mauritii. *Sieber; Bojer.*

Caudex ut videtur brevis, crassus, squamis numerosis rigidiusculis, undulatis, membranaceis, reticulatis, intense nigro-fuscis densissime crinitus.

Stipes digitalis, erectus, tereti-subangulatus, crassiusculus, compressus, facie anteriore sulcatus, hic illic squamosus; squamis subulatis, nigris, deciduis.

Frons spithamæa fere ad pedalem, oblongo-lanceolata, rigida, coriacea, nitida, integerrima, obtusa, inferne attenuata, costata, margine incrassato, cartilagineo, recurvo; *costa* lata, subtus prominens, nuda; nervis horizontalibus parallelis approximatis dichotomis ad marginem attingentibus. *Fertilis* sterili minor, longius stipitata, magis angusta.

Capsulæ totam partem inferiorem frondis, costa excepta, tegentes, fuscæ, globosæ, lato-annulatæ, sublonge stipitatæ.

Semina reniformi-subglobosa, angulata.

Fig. 1. Squama e caudice. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Perhaps scarcely any of the Ferns require more careful investigation than the simple-leaved *Acrosticha;* those of the East Indies, owing to some general resemblance, having, we fear, been confounded with those of the tropical parts of the New World. The present species, for example, has much general affinity with the *A. latifolium* of Swartz, and hence Sprengel has mentioned it as a native of the Mauritius as well as of Jamaica, and Sieber has published specimens in his *Synopsis Filicum,* No 26., under that name. But we find it to differ in the narrower and more obtuse, much more distinctly margined frond, in the shorter stipes, and, what we consider of the most consequence, in the different nature of the scales of the caudex, which extend to the base of the stipes: for whereas in our plant they are about three quarters of an inch long, of a deep glossy brownish-black colour, and so narrow as to give a crinite appearance to the parts on which they are found,—in the West Indian *A. latifolium* they are short, broad, of a paler colour, and considerably ciliato-dentate.

Davallia bifida.

TAB. CCXXXVIII.

DAVALLIA BIFIDA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *DAVALLIA*, Sm. *Sori* subrotundi (vel in lineola verticali) margini plerumque approximati. *Involucrum* superficiarium, ex apice venæ unicæ ortum, lateribus vel lata basi adnatum, exterius et verticaliter liberum. *Br.*

Davallia *bifida;* frondibus late ovatis tripinnatis pinnulis bifidis seu bipartitis laciniis elongato-cuneatis tenui-membranaceis uninerviis truncatis apice erosis, stipite tetragono, involucris transversalibus integris infra apicem laciniarum.

Davallia bifida. *Kaulf. Enum. Fil. p.* 222. *Spreng. Syst. Veget. v.* 4. *p.* 121.

Lindsæa virescens. "*Swartz*," (fide Spreng.).

Hab. Brasil, *Chamisso;* ubi etiam in provincia "Minas Geraes" legit et communicavit *Cl. Langsdorff.*

Radix fibrosa; fibris crassiusculis, rigidis, flexuosis, atro-fuscis, subramosis.

Stipites subspithamæi, erecti, graciles, tetragoni, intense fusco-purpurei.

Frons circumscriptione lato-ovata, acuminata, tripinnata; pinnis primariis secundariisque ovato-lanceolatis, tenui-membranaceis, siccitate etiam læte viridibus, glaberrimis. *Pinnulæ* bifidæ, seu plerumque bipartitæ; laciniis elongato-cuneatis, apice erosis. *Rachis* primaria secundariaque graciles, fuscæ, glabræ, nitidæ, hinc profunde sulcatæ, *ultima* seu *partialis* alata.

Sori in laciniis pinnularum, paulo infra apicem inserti, nervum terminantes, transversim oblongi.

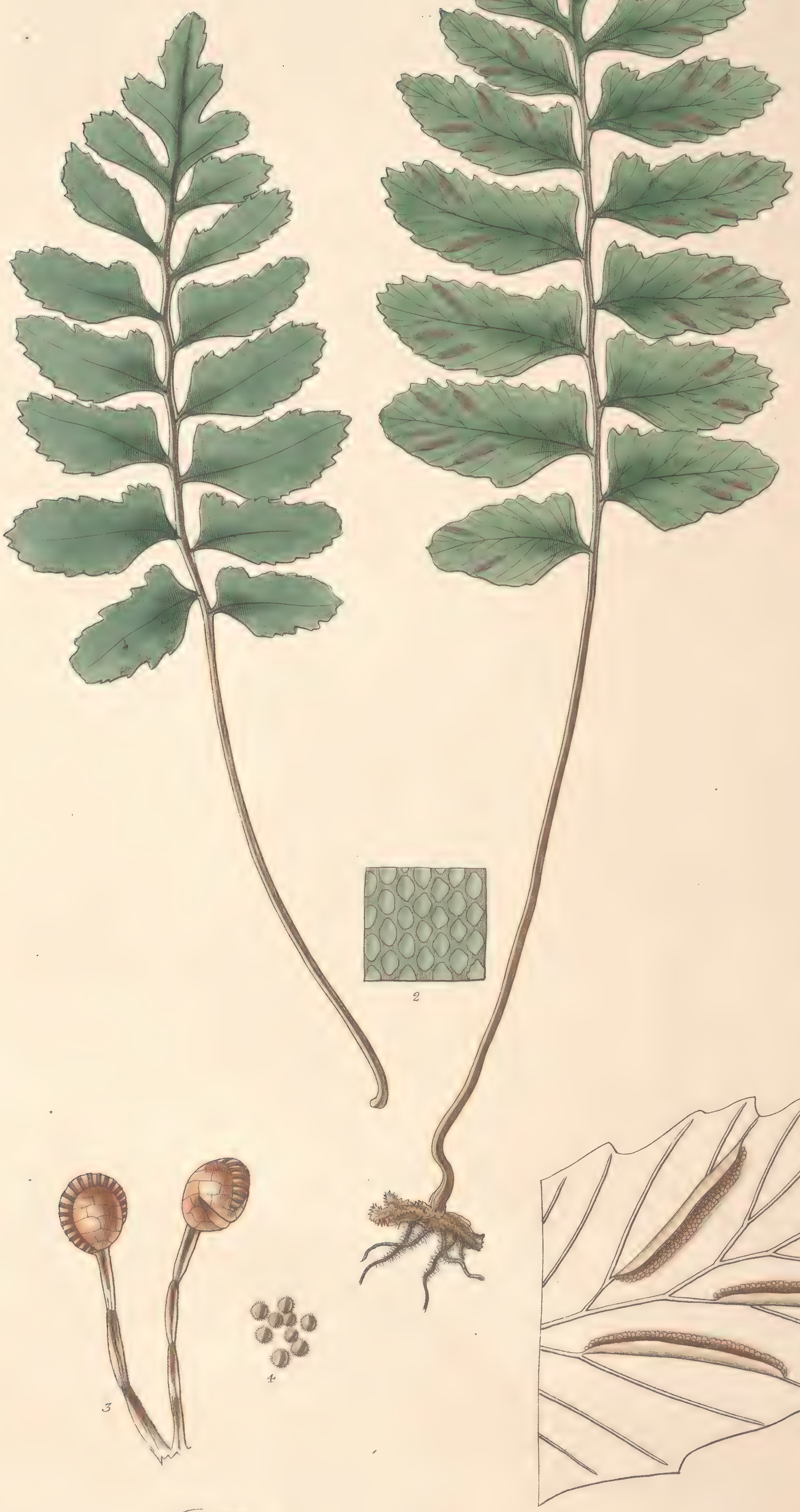
Involucrum tenui-membranaceum, lata basi affixum.

Capsulæ numerosæ, globosæ, lato-annulatæ, longe pedicellatæ.

Semina subtriangularia, pallide flavo-fusca, pellucida.

Fig. 1. Portio pinnæ. f. 2. Apex laciniæ cum soro. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

The only specimens we have seen of this *Davallia* we received from M. de Langsdorff, who gathered them in the remote province of Minas Geraes in Brazil. Its characters are well defined by Kaulfuss under the name of *Davallia bifida,* and he points out some of the marks by which it is best distinguished from *D. tenuifolia:* he has, however, omitted to notice that it is much smaller, of a more delicate and pellucid texture, and of a pale-green colour. The laciniæ are broader, especially towards the extremity, and the sorus is inserted not close to the extremity, but at a distance from it. It is possible that Chamisso's specimens, described by Kaulfuss, came from Minas Geraes, for it does not appear to be a native of Rio.



Asplenium obtusifolium

Dr. Greville delt.

Swan Sc.

TAB. CCXXXIX.

ASPLENIUM OBTUSIFOLIUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd., Spreng.*

Gen. Char. *ASPLENIUM,* Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *obtusifolium;* frondibus pinnatis pinnis alternis ovato-oblongis tenui-membranaceis subpellucidis sessilibus obtusis sinuatis crenatis basi superiore auriculatis inferiore cuneatis, rachi alata.

Asplenium obtusifolium. *Linn. Sp. Pl. p.* 1538. *Swartz, Syn. Fil. p.* 76. *Willd. Sp. Pl. v.* 5. *p.* 314. *Spreng. Syst. Veget. v.* 4. *p.* 83.

Asplenium lætum. *Sieb. Syn. Fil. No.* 199. (non Swartz).

Lonchitis aquatica membrana tenui contexta. *Plum. Fil. p.* 51. *t.* 67.

Hab. In India Occidentali: Insula Martinicæ. *Plumier; Sieber.* Insula Cubæ. *Sprengel.* Insula Dominicæ. *Kraus, M.D.*

Caudex repens, squamosus, inferne radicans.

Stipes digitalis, compressus, hinc subsulcatus, glaber, nudus.

Frons oblongo-ovata, pinnata; pinnis subsesquiunciam longis, membranaceo-pellucidis, minute reticulatis, glaberrimis, ovato-oblongis, obtusis, sinuato-crenatis dentatisque, tenui-costatis, venosis; basi superiore auriculatis, inferiore oblique cuneatis. *Rachis* glabra, alato-marginata.

Sori lineari-oblongi.

Involucrum lineare, tenue, integerrimum.

Capsulæ numerosæ, fuscæ, globosæ, annulatæ, longe pedicellatæ.

Semina globosa, viridi-fusca, sub summa lente hispidula.

Fig. 1. Portio pinnæ cum soris. f. 2. Portio frondis cum reticulatione. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This species of *Asplenium,* long ago figured by Plumier, bears in many respects a considerable resemblance to *A. marinum;* but its fronds are broader and shorter, the pinnæ have quite a different texture, being remarkably thin, membranaceous and pellucid, and instead of regular serratures the margin is sinuato-dentate, the teeth forming so many irregular small angles. It appears, both from its habit and from what Plumier says of its place of growth, to be almost an aquatic fern. "It is found," observes that author, "at the sources of brooks, upon moist and mossy rocks. I have even seen it in the water itself of a spring upon the summit of the Calebasse mountain in Martinique."

Trichomanes Javanicum.

Dr. Greville del.t *Swan Sc.*

TRICHOMANES JAVANICUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES*, Sm. *Sori* marginales. *Capsulæ* sessiles receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *Javanicum;* fronde pinnata lato-lanceolata, pinnis subsessilibus oblongis basi oblique cuneatis obtusis inciso-subpinnatifidis (præcipue margine superiore) nervosis glabris, stipite rachique marginatis setosis, involucris in sinubus laciniarum superiorum plerumque solitariis.

Trichomanes Javanicum. *Blume, Enum. Pl. Jav. p.* 224.

Trichomanes rigidum. *Wall. Cat. of Pl. in Mus. of E. I. C. No.* 161. (non Swartz).

Hab. In umbrosis humidis Javæ interioris. *Blume.* In Insula Singapore. *N. Wallich, M.D.*

Radix e fibris plurimis, crassis, rigidis, nigris, descendentibus, sparse ramosis.

Stipites plurimi ex eadem radice, erecti, crassiusculi, firmi, compresso-triquetri, hinc sulcati, subsetosi, nigro-fusci.

Frons digitalis et ultra, lato-lanceolata, pinnata; *pinnis* horizontaliter patentibus, rigidiusculis, subpellucidis, unciam longis, lato-oblongis, seu oblongo-ovatis, obtusis, inciso-subpinnatifidis (præcipue margine superiore), laciniis subserratis basi oblique cuneatis, costatis, atque dense parallelim nervosis, nervis latis non raro furcatis ad marginem attingentibus. *Reticulatio* parva. *Rachis* compressa, marginata, hic illic pilis patentibus rigidis setosa.

Involucra plerumque solitaria, in axillis seu sinubus laciniarum superiorum pinnæ, elongato-suburceolata, rigida, fusca, fronde semiimmersa, ore vix patente integro.

Receptaculum involucris vix dimidio longius, crassiusculum.

Capsulæ orbiculares, reticulatæ, annulatæ, peltatæ.

Semina angulato-globosa, pellucida, pallida.

Fig. 1. Portio pinnæ cum involucris. f. 2. Involucrum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This *Trichomanes* is of a more rigid habit than the generality of the genus, and less pellucid, owing to the reticulation being formed of a coarser plexus. It seems entirely to agree with the *T. Javanicum* of Blume, and it has been as yet found only in the islands of Java and Singapore.

The *Trichomanes fuscum*, also of Blume, approaches this, as far as we can judge from the specific character; but the midrib of the pinnæ is paleaceo-hirsute on both sides, and the rachis and stipes are clothed with ferruginous hairs.

ADDENDA ET CORRIGENDA.

Tab. 5. *Ceterach pedunculata.*—This Fern forms the genus *Sellignea* of Bory. Two other species, the *S. heterocarpa* and *S. macrocarpa*, have been added by Blume in his *Flora Javæ.*

Tab. 10. *Trichomanes lucens.*—We are now satisfied that the *T. lucens* of this work is not the *T. lucens* of its author Swartz. Since we published our figure, we have received Jamaica specimens from Dr. Bancroft, which, excepting only the more copious fructifications, entirely correspond with it. Owing to Dr. Swartz having made use of the term "bipinnatifid," to express the division of the frond, we were led to believe that the primary and secondary divisions were pinnatifid; but they are truly pinnate in the first instance, the rachis terete, and not in the least winged or margined. The present species we do not find anywhere described, unless, as we suspect, Willdenow and Sprengel have, like ourselves, confounded it with the true *T. lucens.* The former writer, indeed, says, in opposition to Swartz's description, "frons nullo modo pendula." The *Trichomanes lucens* of this work we have received from Sieber (*Flora Mixta, No.* 340.) as the *T. astylum*, n. sp. Kaulfuss MSS.; but the name is inappropriate, as the receptacle is evidently broken away. We propose, therefore, that it should bear the name of *Kaulfussii*,—the synonyms in our present letter-press being excluded.

Tab. 13. *Trichomanes sinuosum.* Add the synonym *T. incisum, Kaulf. Enum. Fil. p.* 261.

Tab. 27. *Asplenium subsinuatum.*—This is also the *Aspl. subsinuatum* of *Wall. Cat. No.* 199. and the *Aspl. rigidum* of *Wall. Herb.* 1823 (not of Swartz). It is also the *Scolopendrium dubium* of Don's *Prodr. Fl. Nepal.*, who brings as a synonym to it the *Asplenium lanceum* of Thunberg's *Fl. Japon. p.* 333.; and *Icon. Pl. Japon. Dec.* II. *t.* 8. The figure of that author agrees with our plant better than the description. The species should henceforward be called *Asplenium lanceum.*

Tab. 47. *Schizæa rupestris.*—The leaves of letter-press to *S. rupestris* and *S. pusilla* have been transposed. Alter the number of the letter-press of *S. rupestris* to XLVII.

Tab. 48. *Schizæa pusilla.*—Alter the letter-press of *S. pusilla* to XLVIII.

Tab. 51. *Danæa nodosa.*—For the name *modosa* engraved on the plate, read *nodosa.* The leaves of letter-press to this and the following plate have been transposed. Alter the number of the letter-press of *D. nodosa* to LI.

Tab. 52. *Danæa elliptica.*—Alter the letter-press of *D. elliptica* to LII.

Tab. 54. *Hemionitis cordata.*—To the synonyms, add *Wall. Cat. No.* 44.

Tab. 65. *Polypodium longifrons.*—To the synonyms, add *Wall. Cat. No.* 274.

Tab. 69. *Aspidium caryotideum.*—To the synonym, add *Wall. Cat. No.* 376.

Tab. 71. *Asplenium ensiforme.*—To the synonym, add *Wall. Cat. No.* 200.

Tab. 75. *Lindsæa polymorpha.*—To the synonym, add *Wall. Cat. No.* 147.

Tab. 76. *Hymenophyllum badium.*—The species so named in Dr. Wallich's Catalogue with a mark of doubt, is different from the plant we have published.

Tab. 77. *Hymenophyllum crispatum.*—Add to the synonym, *Wall. Cat. No.* 169.

Tab. 79. *Botrychium lanuginosum.*—Add to the synonym, *Wall. Cat. No.* 48.

Tab. 89. *Gymnogramma Loveii.*—The seeds ought to have been represented as minutely hispid.

Tab. 94. *Niphobolus sphærocephalus.*—Add the synonym *Polypodium sphærocephalum, Wall. Cat. No.* 272.

Tab. 96. *Aspidium proliferum.*—Erase the mark of doubt from the habitat. We have received a specimen from Jamaica since our figure was published.

Tab. 103. *Adiantum amœnum.*—Add to the synonym, *Wall. Cat. No.* 78. (Hab. Nepal, Sirnuggur, Kumoon, *Dr. Wallich.*)

Tab. 104. *Adiantum lunulatum.*—Add to the synonyms, *Wall. Cat. No.* 77.

Tab. 107. *Pteris chrysocarpa.*—Add the synonym *Lomaria aurea, Wall. Cat. No.* 38.

Tab. 113. *Lycopodium heterophyllum.*—This is not the *L. heterophyllum* of *Willd. Herb.*, and *Spreng. Syst. Veget.*, which is the *L. Jussiæi* of Desvaux, and of our *Enumeratio Filicum*, in Bot. Misc. v. 2.

Tab. 120. *Meniscium triphyllum.*—Add to the synonym, *Wall. Cat. No.* 61. (Hab. Sylhet and Singapore, *Dr. Wallich.*)

Tab. 125. *Polypodium iridioides.*—We have seen some states of this from the Mauritius with the frond so attenuated and elongated as to resemble very closely the *P. polycephalum* of Wallich, *Cat. No.* 273.

Tab. 130. *Pteris stenophylla.*—Add the synonym *P. digitata, Wall. Herb.* 1823. and *Cat. No.* 91.

Tab. 134. *Cheilanthes farinosa.*—Add the synonym *C. dealbata, Wall. Cat. No.* 65.

Tab. 136. *Asplenium integerrimum.*—This is the *A. Finlaysonianum, Wall. Cat. No.* 191;—a name which we think should be adopted, although Sprengel's character sufficiently corresponds with our species: yet it is hardly likely that this new East Indian fern should be identical with a new species lately found in Portorico in the West Indies.

Tab. 137. *Davallia parvula.*—Add to the synonym, *Wall. Cat. No.* 247.

Tab. 144. *Lindsæa cultrata.*—The station of Sylhet refers to the *L. attenuata, Wall. Cat. No.* 151,—a different species.

Tab. 149. For *Trichomanes incisum* (on the plate), read *T. Krausii.*

Tab. 154. *Deparia Macraei.*—This Fern has been described by Kaulfuss (*Enum. Fil. p.* 225.) under the name of *Dicksonia prolifera.* His name has the right of priority; for *Deparia Macraei,* therefore, read *D. prolifera.*

Tab. 155. *Trichomanes Bojeri.*—Add the synonym *T. undulatum, Wall. Cat. No.* 160. Having never received specimens of this species from Dr. Wallich, we were unfortunately ignorant of his having given it the above name till a short time ago.

Tab. 157. *Pleopeltis pinnatifida.*—The *Polypodium macrocarpum* of Presl, *Reliq. Hænk. p.* 23. *t.* 1. *f.* 4, comes very near to this species; but we are doubtful if it be really the same. It is found on the mountains of Peru.

Tab. 177. *Lycopodium ovalifolium.*—Desvaux having preceded us in appropriating this name to another species, we have changed ours to *L. Douglasii* in *Enumeratio Filicum,* Bot. Misc. v. 2.

Tab. 178. *Jamesonia pulchra.*—We are assured by Kaulfuss, that this Fern is the *Pteris imbricata* of Swartz. The descriptions given of it, however, we find to be incorrect. For *Jamesonia pulchra,* therefore, read *J. imbricata.*

Tab. 189. *Asplenium cuneatum.*—We have committed an error in referring this plant to *A. cuneatum:* it appears to be the *A. laceratum* of Desvaux, *Prodr. Fil.* in *Ann. Soc. Linn. Par. v.* 6. *p.* 278. At the same time it is very probable that it is only a broad-leaved variety of *Asplenium præmorsum.*

Tab. 200. *Lycopodium Arbuscula.*—Having lately received specimens of the true *L. Arbuscula* of Kaulfuss, we are convinced that we have done wrong in referring our plant to that species. We have therefore named the present individual *L. Menziesii* in our *Enumeratio Filicum,* Bot. Misc. v. 2.

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